ISSUE OF JANUARY, 1949

# AMERICAN GAS ASSOCIATION MONTHLY

## Get in line for '49

## *GREATEST GAS RANGE ADVERTISING CAMPAIGN IN HISTORY!*

## Gas Industry backs you with $5,000,000 expenditure

More than 2,500,000 new gas ranges sold in '48—a half million in California alone! Home-building at the boom stage! Replacement market scarcely scratched!

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—continuous local advertising;

—more intensive training of your sales people.

The gas industry's record advertising support helps convert already-active acceptance into ever-growing demand. Tie in with this huge promotion program. Sell . . .

GAS

PACIFIC COAST GAS ASSOCIATION

● This advertisement was employed by the Pacific Coast Gas Association to prepare dealers for extensive gas sales activities in 1949.

President Hendee's year-end report which opens this issue shows that 1948 was one of the most eventful years in the gas industry's history. Among other accomplishments, gas utility sales, customers and revenues reached new peaks. . . . A survey of manufacturers indicates the need for concerted effort to reach last year's sales levels. Already one important new campaign of this type has been started, the dramatic "Court of Flame" gas water heater drive. On the local level, John Hiller shows the effectiveness of a modern sales approach. . . . An indication of the renewed emphasis to be placed upon research is given at a meeting of gas production research advisors. Reports on air conditioning, interchangeability and natural gas hydrate studies reveal some of the progress being made under current projects. . . . K. W. Rugh and E. O. Mattocks announce that LP-gas has continued its spectacular growth and has proved a valuable ally in meeting peak loads. . . . F. M. Terry's review of rate trends discloses that the industry in general is moving into a favorable price position to meet competitive era ahead. . . . These and other articles supply a vivid panorama of an industry determined to extend its gains in 1949. . . . Happy New Year!

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• *Mechanical generator set at Harrison, N. J. plant of the Public Service Electric & Gas Company. Photograph by Tyler Fogg, Philadelphia (Courtesy United Engineers & Constructors, Inc.)*

# Gas sets new records in 1948

BY ROBERT W. HENDEE

*President, American Gas Association, and Colorado Interstate Gas Co., Colorado Springs, Colo.*

Despite continuing shortages of steel and other vital materials which have retarded the planned expansion of its production and distribution capacity, the gas industry established several new records in 1948. More customers were served with gas than ever before. Output of gas attained a new high level, gas utility revenues reached an all-time peak, and capital expenditures for construction and expansion of gas utility systems surpassed any previous figure in the history of the gas industry.

New process for manufacturing gas discovered under the comprehensive research program being conducted for the entire gas industry by the American Gas Association already have brought about substantial decreases in costs of basic fuels for making gas with considerable increase in thermal capacity.

•

In the domestic field, intensive research by the gas industry and gas appliance manufacturers has resulted in refinements and improvements in gas appliances and in the utilization of gas, thus increasing the popularity of gas as the ideal fuel for home and industry. Coordinated advertising and promotional efforts on the part of the American Gas Association, gas utility companies, gas appliance manufacturers and dealers brought the story of gas to the largest audience ever reached and resulted in record sales of modern automatic gas ranges. New records were set in the sale of gas refrigerators. Recently developed appliances broadened sales of gas in new domestic fields such as automatic gas laundry drying, gas incineration and all-year gas air conditioning. A gas heat pump using latent heat in earth or water as a source for house heating was one of the year's outstanding developments.

With gas utility companies planning an expansion program calling for expenditures of $3.3 billion over the next five years, and with promotion, research and advertising programs continuing at an accelerated rate, it can be predicted conservatively that the year ahead will continue the gas industry's unbroken record of advancement.

*Statistics*—At the end of 1948 the gas utilities were serving 22,689,800 customers, including LP customers served directly by utilities, an increase of 4.1 percent over 1947. Of this number, 12,242,500 were receiving natural gas, a gain of 13.3 percent; 8,369,000 were receiving manufactured gas, a decrease of 2.3 percent, and 1,756,200 customers were served with mixed gas, a decline of 19.6 percent. Approximately 320,000 customers received LP-gas directly from utilities.

Decreases in the manufactured and mixed gas customer groups are attributed to changeovers of important companies to straight natural gas during the year. In addition, it is estimated that more than 4,500,000 customers are being served with LP-gas in territories not served by gas utility mains.

Utility sales of natural gas during 1948 were 2,802,079,200 M.c.f., an increase of 11.4 percent over 1947. Manufactured gas sales amounted to 447,320,400 M.c.f., a gain of 3.0 percent, and mixed gas sales declined 15.1 percent to total 146,-173,400 M.c.f.

•

Total revenues increased 11.7 percent during the year to reach an all-time peak of $1,559,624,600. The major increases occurred in the natural gas branch of the industry, although revenues of gas utilities serving both manufactured and mixed gas gained substantially in 1948.

*New facilities*—Still limited by shortages of steel, the gas utilities in 1948 continued their increasing efforts to meet the ever-growing demand for gas. These utilities spent approximately $875 million last year in the expansion of production, transmission and distribution facilities, surpassing the previous record of $800 million in 1947. The increase in 1948 is especially noteworthy when it is remembered that the 1947 figure included $143 million for purchase of the Big Inch and Little Inch pipelines from the Government.

Forecasting a continuation of this tremendous demand for gas, the industry has estimated its capital requirements for construction and working capital for the five-year period 1948-1952 at 3.3 billion dollars, with more than 90 percent of this amount to be expended for the construction of new facilities.

*Natural gas expansion*—The natural gas branch of the industry continued its spectacular growth. The Federal Power Commission, during the year, authorized the construction of approximately 8,500 miles of new pipeline, bringing the total of natural gas pipelines in the United States to about 251,330 miles.

The magnitude of this great system can be appreciated better when it is pointed out that today's natural gas pipe-

line system exceeds the railroad mileage in the nation by 17,000 miles and exceeds the oil pipelines by more than 100,000 miles. In addition to projects already approved, applications pending before the Federal Power Commission total an additional 14,600 miles.

Largest single authorization by the Commission for construction by the Trans-Continental Gas Pipe Line Company of a 1,840-mile pipeline from Texas to New York City at an estimated cost of $189 million. This new line, estimated to be the longest and costliest natural gas pipeline in the world, will supply 340 million cubic feet of natural gas daily to gas utility companies in New York, New Jersey and Pennsylvania.

Other important authorizations include those for the Texas Eastern Transmission Corporation which will add 1,400 miles to its system, and the Tennessee Gas Transmission Company's project which includes a 1,387-mile line from Texas to Pittsburgh. It is expected that total supplies of natural gas in the territories to be served by these lines will be increased 20 percent. More than $675 million was spent during 1948 on natural gas expansion and it is estimated that about $1,950,000,000 will be spent in the next four years.

Shortages of steel, particularly in 24-inch to 30-inch steel pipe, are handicapping the expansion programs of natural gas companies. Approximately 1,950,000 tons of steel were required for the 8,500 miles of pipeline authorized by the F. P. C. in 1948 and an additional 3,675,000 tons will be needed to complete the additional 14,600 miles for which certificates are pending.

Soaring costs of materials and labor have necessitated raises in field prices of natural gas by a few producers. Transmission-line construction costs have climbed from a pre-war level of about $50,000 a mile to nearly $100,000 a mile today. While some field prices or delivery prices of natural gas have increased and some companies gave this as the reason for their rate increases, only 11 companies supplying natural gas reported rate changes in 1947 and only five thus far in 1948.

## Reserves rise

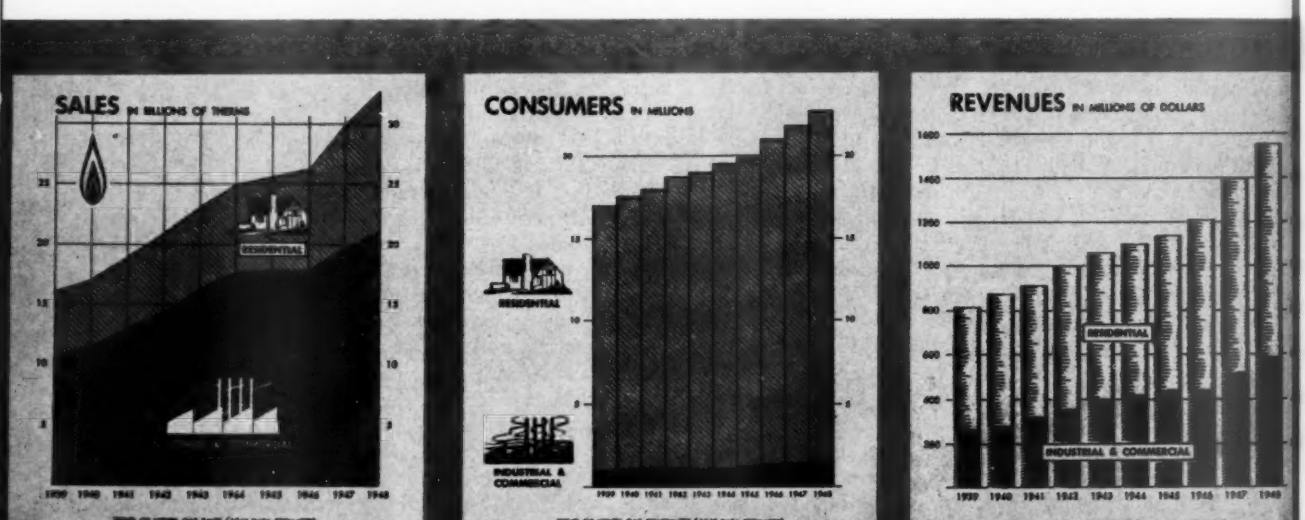
Proved natural gas reserves continue to gain despite the increased yearly consumption and hold every promise of being adequate to meet the potential demand for many years to come. The Reserves Committee of the American Gas Association estimated that proved recoverable reserves at the beginning of 1948 totaled 165.9 trillion cubic feet compared with 160.6 trillion cubic feet at the beginning of 1947. Although 5.6 trillion cubic feet were produced during 1947, new discoveries and upward revisions of reserves in proved fields continue to exceed the rate of production and consumption of natural gas.

The proved reserves of natural gas in the United States have increased more than 700 percent since 1925 and more than 230 percent in the past ten years. As new gas fields are discovered and new and improved methods of utilization of natural gas are devised, it is expected that reserves proved to be available will continue to increase even in the face of an accelerated demand.

Manufactured gas companies in the East are evidencing increased interest in the importation of natural gas into their areas. Many are planning to use it to alleviate the problem of increased demands, instead of expanding their plants in the face of high construction costs.

*Manufactured gas*—The record of achievement of the manufactured gas industry in the past year is an outstanding tribute to an industry that made substantial progress along a road beset with obstacles. The demand for gas in some manufactured gas areas continued to exceed production capacity. Expansion of production and distribution plants was limited by shortages of steel and other necessary materials. Rising costs of labor and gas making fuels narrowed, and in many instances eliminated profit margins. More than 100 manufactured gas utility companies found it necessary to petition rate increases to offset these sharply rising costs.

More than 50 manufactured gas companies have reported rate changes this year and most of these were rate in-




**During 1948 total utility gas sales rose to a new peak; the number of customers served reached 22,689,800, and total revenues hit a new alltime high**

creases. Regulatory commissions have been quick to recognize the urgency of the manufactured gas situation and authorizations for increases in general have been forthcoming promptly, following the presentation by the company of the facts with respect to the need for increased revenue.

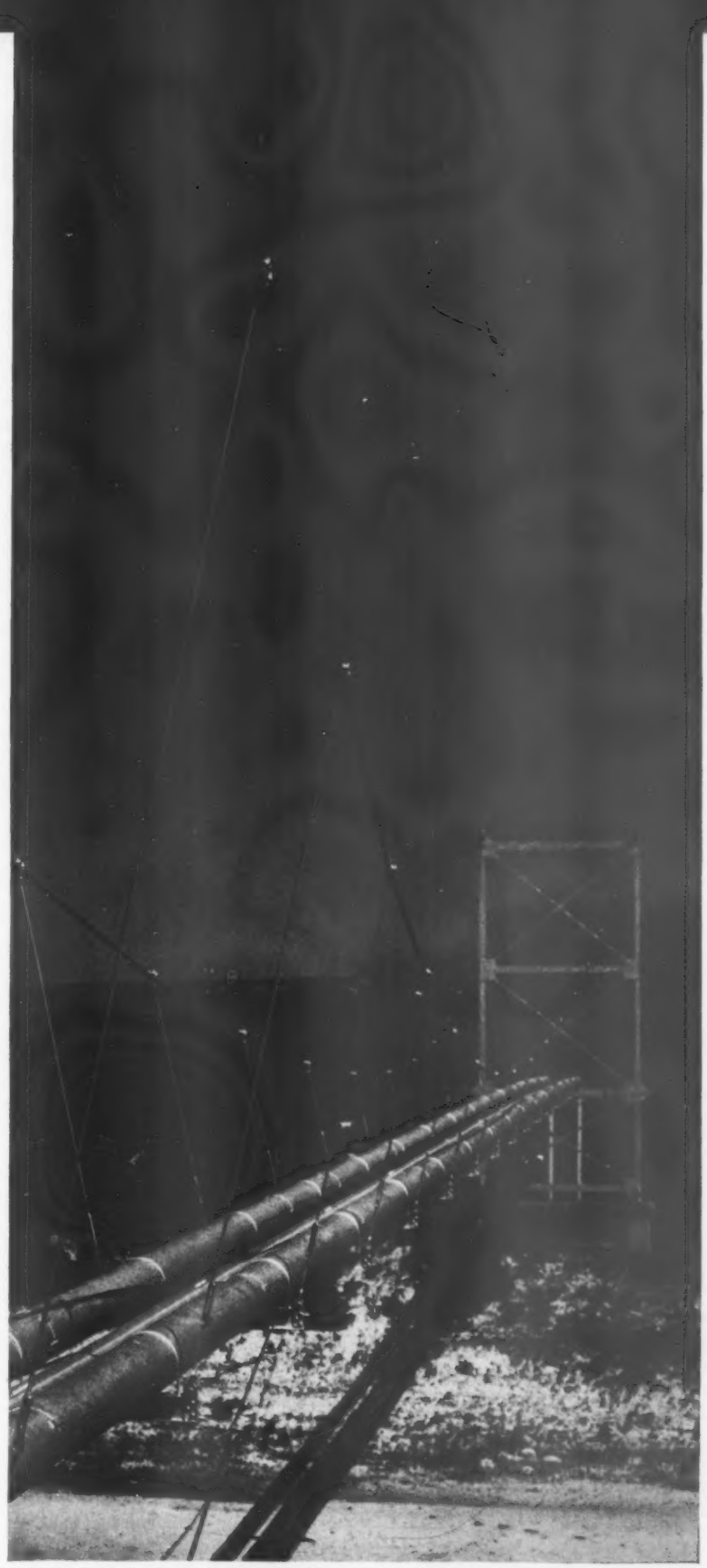
Despite serious handicaps the manufactured gas utilities registered gains in customers served, in volume sent out and total revenues. Research projects carried on under the industry's accelerated research program will serve to aid the manufactured gas companies in meeting peak load and other problems.

Catalytic reforming of natural gas, propane, butane and lower grades of gasoline to manufacture a low gravity carrier gas that can be enriched to produce any desired B.t.u. content, is one of the results of gas industry research that has helped to meet peak load problems. Plants to produce this type of gas can be located at strategic points in a gas utility's system and the finished product can be pumped directly into the company's mains without having to circulate through the main production plant. A plant of this type has been in operation in the Long Island Lighting Company (New York) system and additional catalytic reforming plants are being installed in Pennsylvania.

*Appliance production*—While manufacturers of gas appliances were also hampered by shortages of steel and other critical materials, production and sales of gas ranges reached new record levels during the year. Under the stimulus of the first completely coordinated advertising and promotional campaign ever launched in the industry, automatic gas range sales increased 300 percent over the previous year and sales of other types increased approximately 20 percent to give a record total of 2,800,000 surpassing the previous peak year of 1947 when a total of 2,390,000 gas ranges were sold.

Shipments of automatic gas water heaters totaled 1,500,000 units, the second largest volume ever sold in a single year. Sales of 1,800,000 units in 1947 still stand as a record performance. Sales of gas refrigerators made substantial gains.

Production of central heating appliances also declined because of restrictions on gas house heating sales in many territories. A total of 300,000 units were shipped last year compared with 750,000 units in 1947. This decline was offset to



Suspension bridge in Texas, part of the nation's more than 251,000 miles of natural gas pipeline

some extent by increased sales of gas space heaters and other direct heating appliances in natural gas areas, and in manufactured and mixed gas areas where no restrictions were imposed. More than 2,500,000 direct heating units were sold last year.

*Developments in gas appliances*—The 1948 exhibition of gas appliances sponsored by the Gas Appliance Manufacturers Association in conjunction with the thirtieth annual convention of the American Gas Association at Atlantic City, N. J. in October, offered gas equipment manufacturers their first opportunity to show post-war models of gas appliances on an industry-wide scale. Reconversion problems and shortages of steel and other materials had a marked influence on models displayed in 1946 and 1947. While material shortages still retarded production, the 1948 exhibition was rich in new ideas.

Several new uses of gas were shown and stimulated great interest in the gas industry. Of particular mention was a gas heat pump operated with an internal combustion engine fired by gas. The heat pump has been widely publicized as a future means of economical househeating. Still in the experimental stage, further impetus will be given to the exploration of its possibilities by the aid and interest of the gas industry in the heat pump.

A new barbecue device in which numerous different foods can be cooked simultaneously with materially shortened cooking time was a new development in the commercial field. Another commercial development of great interest to the soft drink and dairy industry was a new bottle washer employing caustic solutions under pressure heated by gas.

New devices to help customers achieve easier control of appliances, better service and improved application of gas to customers need were shown. Among the devices attracting attention were combination oil-gas burning house heating systems. Designed for natural gas areas where low-cost gas is available and in areas where temporary restrictions in the use of gas sometimes occur, the new equipment can be shifted immediately from whichever fuel is in short supply at the moment to the more plentiful fuel.

One manufacturer of water heaters introduced a new type of water heater control with 100 percent shut off and with the thermostat liquid bulb fastened to the outside of the water heater in an attached well. Another manufacturer had a plug-in room thermostat for heat action that can be attached by any consumer.

Single-point ignition for gas ranges was shown for the first time. Both electric and all-gas ignition systems were featured, making possible the automatic lighting of all burners on a gas range from a single pilot light.

Gas ranges of an advance design were exhibited. One range displayed a series of lever switches in a control panel in the back splasher, eliminating the conventional gas-cocks at the front, sometimes regarded as a danger hazard for children. A self-leveling broiler that can be adjusted to any position without removing the broiler from the oven was a new development that attracted interest. One piece tops and oven interiors that promote cleanliness by eliminating cracks and sharp corners also proved popular. A new method of insulating ranges by introducing air-spaces between layers of insulation was an innovation destined to remove objectionable hot spots in oven exteriors.

The year also saw definite advances in heavy equipment operated by gas. Centrifugal compressors are now being used to move large volumes of natural gas through long-distance transmission lines. Two-cycle gas combustion engines producing ten percent more horsepower with a reduction of 15 percent in fuel costs greatly increased the efficiency of compressing gas.

*Industrial and commercial gas*—Industrial and commercial utilization of gas has advanced in many industries during the past year, and developments in this field have kept the gas industry in the front ranks of the progress parade. In the automobile industry new applications of gas include gas-fired radiant tube furnaces for controlling atmosphere cycle annealing and gas-fired furnaces for rapid billet heating. Gas-fired ovens for baking and curing finishes gained in use by this and other industries.

## New use for gas

A new use for gas offers service in municipal smoke abatement programs, successfully incinerates smoke and industrial fumes. Textile processing through application of gas received increased favor and a new appliance uses gas as the fuel for applying latex coating for cotton tire fabrics. Last year witnessed the development of several types of gas-fired lumber kilns, a new utilization of gas which contributed materially toward easing the nation's housing problem. Through gas drying, the time for seasoning green lumber is drastically shortened, thus greatly expediting the flow of lumber into the building market.

Direct reduction and distillation of zinc ores by natural gas became an accomplished fact last year. The Bureau of Mines has issued several reports on this method which is now being used for the salvage of zinc residue and scrap.

Food service equipment manufacturers, profiting by the Association's domestic research reports and from cooperative efforts with the Utilization Department of A.G.A. have developed new appliances and improved the application of gas in others.

A new device that created much interest among restaurant operators during the year permits the cooking of several different foods at the same time. It consists of a display type elevated oven with glass sides. Foods placed in holders or on spits revolve before radiant gas burners and are roasted nearly twice as fast as by conventional methods. Another new gas appliance for commercial kitchens is a small steam cooker for preparing small batches of vegetables and for use as a portable food *(Continued on page 46)*

# Man wanted!

● Wanted—A man for hard work and rapid promotion; a man who can find things to be done without the help of a manager and three assistants.

A man who gets to work on time in the morning and does not imperil the lives of others in an attempt to be first out of the office at night.

A man who listens carefully when he is spoken to and asks only enough questions to insure the accurate carrying out of instructions.

A man who moves quickly and makes as little noise as possible about it.

A man who looks you straight in the eye and tells the truth every time.

A man who does not pity himself for having to work.

A man who is neat in appearance.

A man who does not sulk for an hour's overtime in emergencies.

A man who is cheerful, courteous to everyone, and determined to make good.

This man is wanted everywhere. Age or lack of experience do not count. There isn't any limit, except his own ambition, to the number or size of the jobs he can get. He is wanted in every big business.

—*Industrial Management Bulletin.*

# Recent trends in rate making*

F. M. Terry who for more than ten years has been an active member, A. G. A. Rate Committee

BY F. M. TERRY

*Associate Rate Engineer*
*Consolidated Edison Co. of*
*New York, Inc.*
*New York, N. Y.*

Ratewise the past Association year has been characterized by a large increase, compared to the previous year, in the number of applications for rate increases made by companies supplying gas. These applicants were scattered over the country from Maine to Washington.

Increases were applied for by both natural and manufactured gas companies but the majority of the applications have been made, as was to be expected, by companies supplying manufactured gas. The underlying economic factors which have led to the continuation and even acceleration of the trend toward gas rate increases since its beginning a couple of years ago have been discussed too often in the last few months to require elaboration. They may be summarized as follows:

First—The cost of production for manufactured gas companies continued to increase in 1948 due to the higher costs of coal, oil, and upward wage adjustments. Natural gas companies experienced some increases in field prices or delivered prices as well as increased labor and material costs.

Second—The phenomenal trend toward the use of gas for space heating has continued. The result of this trend was a supply situation in the winter of 1947-1948 which taxed the facilities and ingenuity of almost every gas company throughout the country.

This condition coupled with the fact that space heating rates in general have retained much of the incremental character on which they were originally based, has presented a serious economic problem. If the price of competitive fuels continues to rise, the requirements for gas for space heating during the 1948-1949 winter season may also present a problem despite the restrictions with respect to new business which the regulatory authorities have allowed some companies to place in their schedules.

Third—Increased requirements for gas have made it necessary for practically every company supplying either natural or manufactured gas to enlarge its manufacturing or transmission and distribution facilities, or both, at construction costs greatly in excess of those of a few years previous.

In the face of the imperative need for increased revenues, the trend toward increases in gas rates began in earnest in 1947 and has continued at an accelerated pace thus far in 1948.

Regulatory commissions have been quick to recognize the urgency of the situation and the majority of the applications have been granted. The authorizations for increases in general have been forthcoming promptly following the presentation by the company of the facts with respect to the need for increased revenue. In many cases it has not been necessary to present detailed and exhaustive proof of value of plant and of past and future operation and maintenance expenses. Regulatory commissions have acted on a reasonable showing of need for increased revenues.

The accompanying table shows by states, the number of companies reporting rate changes in 1947 and to October 31, 1948, subdivided into companies supplying manufactured, mixed, natural and LP-gas.

*Manufactured gas companies*—According to information received in response to a questionnaire sent out by the Statistical Bureau of the American Gas Association, 25 manufactured gas companies reported rate changes in 1947, and as of the end of October, 53 companies have reported rate changes in 1948, including ten of the companies which had reported changes in their rates in 1947.

Practically all of these changes are rate increases. Occasional decreases in certain specific schedules may be found to a very minor extent due to the withdrawal of non-standard schedules or other necessary re-arrangements or rate simplification. In some cases certain companies have been granted three separate rate increases when it appeared rising prices would outstrip the increased revenues secured by the previous rate increase.

## No Set Pattern

There appears to be no set pattern with respect to the kind of rate changes, the number of rates affected or the specific methods used to secure the additional revenues. In practically all cases the rate increases have been initiated by the company, but in one case in 1947 and in one case in 1948, apparently the commission itself initiated the change.

Each application apparently has been governed by the particular situation which the company faced at the time. The decisions of the commissions likewise have been based upon their own appraisal of the specific local situation.

* Sponsored by the Association's Rate Committee and based on information supplied by companies filing rate changes with the A. G. A. Statistical Bureau.

NUMBER OF COMPANIES REPORTING RATE CHANGES TO A. G. A. STATISTICAL BUREAU IN 1947 AND TO OCTOBER 31, 1948

| State | *Manufactured* | | *Mixed* | | *Natural* | | *LP* | | *Total** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *1947* | *1948* | *1947* | *1948* | *1947* | *1948* | *1947* | *1948* | *1947* | *1948* |
| Arizona | | | | | 1 | | | | 1 | |
| California | | | | | 3 | 2 | 1 | | 4 | 2 |
| Connecticut | 1 | 5 | | | | | | | 1 | 5 |
| Delaware | | 1 | | | | | | | | 1 |
| Florida | | 3 | | | | | | 2 | | 5 |
| Georgia | | | | | | | 1 | | 1 | |
| Illinois | | 1 | | | | | 1 | 1 | 1 | 2 |
| Indiana | | 1 | | 1 | 1 | 1 | | | 1 | 3 |
| Iowa | 1 | 1 | | | | | 1 | 1 | 2 | 2 |
| Maine | 1 | | | | | | | | 1 | |
| Maryland | 1 | 1 | | | | | | 2 | 1 | 3 |
| Massachusetts | 5 | 5 | | | | | | | 5 | 5 |
| Michigan | 1 | 1 | | | | 1 | 1 | 1 | 2 | 3 |
| Missouri | | | | | 2 | | | 1 | 2 | 1 |
| Minnesota | | | | | | | | 1 | | 1 |
| New Hampshire | | 1 | | | | | | | | 1 |
| New Jersey | 1 | 2 | | 1 | | | | | 1 | 3 |
| New York | 4 | 10 | | | | | 1 | 1 | 5 | 11 |
| North Carolina | 1 | 2 | | | | | 1 | 1 | 2 | 3 |
| Ohio | | 1 | 1 | | 1 | | | | 2 | 1 |
| Oregon | | | | | | | | 1 | | 1 |
| Pennsylvania | 1 | 6 | | | 2 | | | | 3 | 6 |
| Rhode Island | | 1 | | | | | | | | 1 |
| South Carolina | 1 | 2 | | | | | | | 1 | 2 |
| Tennessee | | 1 | | | | | 2 | 2 | 2 | 3 |
| Vermont | 2 | 1 | | | | | 2 | 2 | 4 | 3 |
| Virginia | | 2 | | | | | 1 | | 1 | 2 |
| Washington | 3 | 2 | | | | | 2 | 2 | 5 | 4 |
| West Virginia | | | | | 1 | 1 | 1 | 1 | 2 | 2 |
| Wisconsin | 1 | 1 | | | | | 2 | 2 | 3 | 3 |
| Ontario, Canada | 1 | 2 | | | | | | | 1 | 2 |
| TOTALS† | 25 | 53 | 1 | 2 | 11 | 5 | 17 | 21 | 54 | 81 |

*Where a company supplies more than one type of gas they have been listed under each type; consequently the total shown for each period will exceed the number of companies reporting. There are eight such companies appearing in the following tabulation.

†Ten companies reporting rate changes in 1947 also reported changes in their rates in 1948 and have been included in the totals for both years.

For example, almost without exception the rate increases granted in 1947 and 1948 by the New York State Public Service Commission are on an interim basis and the cases have been kept open for review.

Both in 1947 and in 1948 the predominant reasons given by companies in their applications for rate changes have been the increase in fuel costs, the increase in labor costs, and the deficiency in over-all earnings.

Since the specific means adopted by the companies to secure increased revenues depended upon their existing rate structure and the relative importance of the various factors leading to the application for the increase as well as the regulatory commission attitude, the specific rate changes varied widely in 1947 and again in 1948. Many companies reported more than one type of change in one or more of their rates.

However, the most frequent type of rate change was one in which the price of the various rate blocks was varied to suit the exigencies of the case, but such variation was not uniform. Coupled with this, there was apparently an increase in the minimum charge on the part of many companies, both in 1947 and in 1948. Of the 68 manufactured gas companies reporting changes in 1947 and 1948, 34 companies changed their rates on a varying price basis, while 35 companies included changes in the minimum charge.

The next popular change seemed to be an "across the board" increase of a uniform amount in all the rate blocks, with 20 companies adopting this method for one or more rates in 1947 and 1948 to date. Eleven companies adopted a uniform percent increase and 20 companies increased the price of the terminal blocks of certain of their rates. Two companies changed the size of their rate blocks and four of the reporting companies did not indicate the specific nature of the change.

Replies of the reporting companies did not indicate clearly, in many cases, the rate classifications affected and the extent of the revenue change in each classification. It appears though that of the total amount of increase reported in 1947, the greater proportion was occasioned by increases in residential and space heating rates with commercial and industrial rate increases accounting for a smaller proportion of the total.

Information for the year 1948 is less specific, but again it appears that a fairly large proportion of the total increase was occasioned by increases in the residential and space heating rates, although apparently commercial and industrial rate increases were larger in total in 1948 than in 1947.

As can be seen from this very general resume of rate changes of manufactured gas companies in the last two years, each change, as might be expected, is governed in large part by the exigencies of the particular situation in which the company finds itself at the moment. It is obvious that this necessarily would need to be so, as the degree of emergency in which each company is involved and its need for increased revenues varies considerably from one of a strictly temporary nature to a situation where the deficiency in revenues may be of comparatively long standing.

It does appear that either through the increase in the terminal blocks or by the application of a fuel adjustment charge or by a more general revision of the rate structure, that practically without exception all companies which have modified their rates in 1947 and to date in 1948 have increased the charges for space heating. It likewise appears that most of the reporting companies have also found that their terminal block prices, at least for large industrial and commercial customers, have been too low and that they have taken steps to remedy the situation.

*Natural Gas Companies*—With the exception of construction costs for new facilities, natural gas distributing companies apparently have been affected by the rising trend of labor and material costs to a considerably lesser extent up to the present time than have manufactured gas companies. While some field prices or delivery prices of natural gas have increased and some companies gave this as the reason for their rate increases, only 11 companies supplying natural gas reported rate changes in 1947 and only five thus far in 1948.

The principal reason given for the rate increase application was insufficiency of over-all earnings. Several methods were used to secure increased revenues. The method most frequently

used was by varying the prices of the individual rate blocks. However, three companies used a straight "across the board" change. The detail available with respect to the rate classifications affected by the increases indicates that the majority of the increases were made in space heating rates and large industrial and commercial customer rates.

*Mixed gas and LP-gas companies*—In the year 1947 one company supplying mixed gas reported a rate increase and two reported increases in 1948. Seventeen companies supplying LP-gas reported rate increases in 1947 and 21 companies supplying LP-gas reported rate increases thus far in 1948.

*Fuel adjustment provisions*—On October 30, 1948 there were 127 gas companies which had some form of fuel adjustment provision. Included among these 127 were 84 companies supplying manufactured gas only and 17 companies which supplied natural or liquefied petroleum gas in addition to manufactured gas. Fifteen natural or natural and LP-gas companies had a fuel adjustment provision, while nine companies supplying LP-gas and two mixed gas companies also had a fuel provision.

Of the manufactured gas companies reporting recent rate changes, three reported the adoption of a fuel adjustment in 1947 and ten in 1948. Ten of these companies applied the fuel adjustment to all classifications including residential and small commercial customers. Two companies applied the fuel adjustment only to the larger space heating and industrial customers, and one to space heating customers only.

The fuel adjustment provisions which apply to sale of natural and LP-gas are based, in general, on the cost of competitive fuels in the area. While such clauses are also used to some extent by manufactured gas companies, the majority of the fuel adjustments of manufactured gas companies are based on cost of gas-making materials to the company.

The rate changes indicated on the table which have actually been made in the past two years and which have been described previously, emphasize certain things which should be pointed out:

(1) While the regulatory commissions, in general, have been prompt in granting gas rate increases, of itself an encouraging sign of the understanding which the regulatory authorities have of the problems of the gas industry, it should not be assumed that the commissions will continue to consider these increased rates as permanent rates. In fact, one state commission has authorized practically all rate increases on an interim basis only.

(2) Many increases have been approved on only a prima facia showing of need for increased revenues which often involved no more than a demonstration that operating revenue deductions exceeded or would exceed operating revenues. The question of "fair return" has been by-passed temporarily in favor of an immediate increase.

(3) Interim rate increases or rate increases which have been granted without a full consideration of the future trends of operating revenue deductions and the rate base will in all probability have to be reviewed in the not distant future. The apparent continued growth of the industry and the increased costs of the capital requirements per unit of additional output indicate that every company should determine the revenue requirements to support the added capital investment in preparation for consideration of permanent future rate levels.

(4) Increases have been made, almost without exception, in those rate classifications where the rate levels have become obviously at variance with the cost of competitive fuels or with the demonstrable cost of gas production and distribution. The apparent expediency of these increases suggests again the desirability of load characteristic studies which will aid in the evaluation of the various classification rate levels. They also suggest the desirability of a continuous review of the competitive factors which have a bearing on the fixing of rates.

# Gas appliance and equipment sales soar

SALES of gas ranges, gas refrigerators, gas water heaters and gas space heaters reached all-time highs in 1947 and 1948, according to Frank J. Nugent, president, Gas Appliance Manufacturers Association. With an increase of almost 20 percent over 1947, sales of residential gas ranges attained an all time high in 1948 of 2,800,000 units. Automatic gas water heater sales totalled 1,500,000 in 1948; gas space heaters 2,500,000 units; gas-fired central house heating (furnaces, boilers and conversion burners), almost 300,000 installations. Gas refrigerator sales reached a new peak.

Approximately 26 percent of the 2,800,000 gas ranges sold in 1948 were for use with LP-gas. Automatic gas water heaters for LP-gas homes represented 12 percent of 1948 sales. Correspondingly high percentages of other household appliances were for use with LP-gas.

Appraisal of gas appliance manufacturers' thinking on 1949 prospects indicates a need for stepping up sales effort and promotion by utilities, manufacturers and dealers merchandising their products, if 1947-8 peak levels are to be maintained. This report by G.A.M.A. followed an analysis of opinions received from 107 manufacturers of domestic and commercial gas ranges, automatic gas water heaters, and central and direct gas heating equipment, who shipped more than three million gas appliances last year.

The survey indicated that the manufacturers replying are realistic and conservative concerning their 1949 activities, with the consensus being that unless there is concerted sales action last year's levels may not be attained. Facing up to uncertainties, a majority of the manufacturers feel that steel availability will be no more than last year.

With business returning to a competitive basis some gas companies already are restoring gas appliance sales staffs to prewar size or are increasing them, are cultivating new or neglected markets and are inaugurating local advertising and promotion drives to support those of the manufacturers, G.A.M.A. and the American Gas Association.

According to the opinions received in the G.A.M.A. survey, a number of the domestic gas range manufacturers are assuming gas utilities will start again to aggressively merchandise and promote ranges with both their own and dealer selling organizations. One manufacturer comment was to the effect that if the present rate of the gas industries promotion and merchandising is continued in 1949, gas range sales will be down.

Gas water heater makers are inclined to the opinion that activities in their field will be greater if steel is available.

Comments from manufacturers of gas-fired central heating equipment were varied, stating that the health of their industry would depend upon gas supplies, steel and the new house market.

Similar comments came from makers of direct heating equipment.

The author photographed at A. G. A. convention

# Importance of the industrial gas load

BY FRANK H. LERCH, JR.

*President, Consolidated Natural Gas Co., New York, N. Y.*

The benefits which low-cost, highly efficient gas fuel offers to industrial and domestic consumers alike are simply unlimited. In recent years the industrial market has become a greater revenue producer. *Industrial* gas sales are important to the domestic user and to the community as well as to the company. The responsibilities of this larger load are those of service. That word is the slogan of the gas industry.

These larger sales of gas present a great variety of problems—changing with the times and with each company's individual market conditions. Long ago the desirablility of industrial sales arose from the fact that they boosted volumes and revenues, particularly of natural gas companies facing large production obligations to lessors and in competitive withdrawals of gas from the natural reservoirs. The manufacturing companies never were faced with this delectable situation

In later years with declining gas supplies, increasing house heating gas demands due to higher prices for competitive fuels in the domestic market and necessity of going so far afield for gas with attendant higher costs, the situation has changed. Now I think the economic problems involving industrial sales are much more common to the industry as a whole than ever before. To the operator in both natural and manufactured gas it has become a question of supply and load-factor. The manufacturing companies are looking forward to the Utopian promises of natural gas help from pipeline companies. They need it but look for the ants at that picnic.

The advantages in industrial sales are positive, whether arising from election to sell such gas or not if you have such a choice, or arising from the necessity to sell for load factor control Its advantages may be listed as follows:

First—This class of sales helps greatly in maintaining a good load factor on your producing equipment, or in purchasing gas from pipelines or producers. This means a better average cost or price.

Second—They help to stabilize and distribute earnings or revenues through the year.

Third—They contribute to the domestic users' gas rate. That is perhaps an unfortunate feature of the regulation process, but we must recognize it regardless of our private opinion.

Fourth—They contribute to the industrial development of the service territory, especially in attracting high price industrial demand.

But contra to these four items, comes the great problem of supply with all it entails in the way of additional equipment, expensive gas purchase contracts

Gas at work in heat treating department of a factory where Diesel locomotives are made

Excerpts from paper presented at Industrial and Commercial Gas session during A. G. A. convention in Atlantic City, N. J., October 4-8.

and all the other things financially-minded boards of directors stress.

I would like to discuss briefly each of the points I have mentioned. Remember, I'm not providing the answers. They are for you to work out.

Every company faces increased sales in domestic accounts. The high prices (freely fixed) for competitive domestic fuels is taking care of this growth for us at a faster rate than is wholly acceptable, to put it mildly. This domestic business is our base load. We can't avoid it, some day we'll want it all I'm sure. But it does mean an overwhelming load factor for every one of us. We must have producing capacity, or standby or storage or pipeline contracts to take care of the demands as they occur. All these are expensive and would certainly by themselves put domestic rates too high for the traffic to bear or for regulatory commissions to accept. We therefore look to additional off-peak outlets to improve conditions.

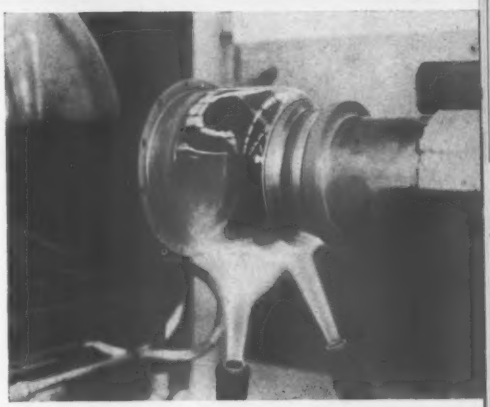
Naturally we look to industrial customers to buy our gas. Such sales are made on firm or interruptible bases. But neither is as simple as I have made it sound and some companies are even now faced with the complications arising from firm industrial sales. What to do for such customers when there isn't any gas available in the winter? Therein lies the major question of whether industrial sales alone are the answer.

On several days during my vacation I talked with George Hawley of the Bridgeport company. His plaint was not the value of industrial sales—they sell a large perecntage of their output to industry on a firm basis. His question was, "Where can we get the gas we are going to sell in this market?" I'm sure you can see the ramifications of this juggling trick stretching out before you.

As to the second point, you can readily see the advantages of revenue coming in to the exchequer in the summer months. Money, you know, has its attendant costs just as gas does.

The third point also contains its meaning in its statement, and is comparatively simple. Unfortunately the regulatory theory doesn't look the same when it is practiced. Generally, a commission allows a company sufficient income derived from rates and all other sources to keep it on a sound financial basis and show a fair return—not always a satisfactory one. Since domestic use is basic, it must pay what the other sources don't provide; hence the other sources are important in maintaining reasonable rates to domestic users.

Going to the fourth point, it is apparent that if gas fuel is attractive to industry for processing, for raw materials, etc., the better industries are aware of its advantages and will go where it can be enjoyed along with other resources of a territory, such as a skilled labor supply, raw materials, nearby markets and adequate transportation. A firm supply of gas is often the factor that swings a decision of where to locate a plant. Such a service territory is an asset no gas company can afford to trifle with, nor perhaps prosper without.



Brazing manganese-copper fillet (top) on inside of steel airplane propeller, and (bottom) annealing radio transmitting tube in glass lathe

My conclusion from the above four points is that the industry must go after industrial sales. They are becoming almost as basic as domestic sales and often more attractive.

As to the contra point—well you must answer it. From what I know of the men in the industry not one fails to recognize his most important task.

Let me illustrate these points by the experience of one company—a large natural gas distributing company with which I am familiar. I'll call it Company A.

Company A has 40 percent saturation of house heating customers, with a load factor of *less than* 40 percent on its domestic business alone. Its industrial sales amount to about one-third of its total annual sales.

Industrial business in the territory served has a load factor of 73 percent—on the assumption that the company can meet its industrial requirements on a peak day.

Company A's domestic sales in the

Row of gas-fired crucibles in bronze foundry, U. S. Naval Gun Factory, Washington, D. C.

peak months of 1947-48 heating period averaged 409 percent higher than in the month of lowest domestic demand. This will probably be nearly 500 percent in winter 1948-49. When industrial sales are added in, the spread between the peak and low months was reduced to 220 percent in 1947-48, and this year will be about 240 percent. The stabilizing effect of the *fairly constant* industrial demand is evident from these figures.

Company A, with its 40 percent saturation of house heating customers and with one-third of its total gas being sold for industrial purposes, has a combined load factor for all gas sold of approximately 46 percent. This industrial business actually results in an average *reduction* of ten dollars a year for each domestic customer, or about 7½ cents per thousand cubic feet in his rate.

To state it another way, residential and commercial customers of Company A would pay *15 percent more* for the gas they use if the company had no industrial business. This company's domestic rates are fixed by a state Public Service Commission and the Commission takes the industrial revenues into account when determining the balance of the revenue the company requires to collect from its other customers.

Fortunately Company A is favorably located in regard to underground storage facilities which it has developed tremendously in the past few years. It now obtains sufficient gas in off-peak periods to have a deliverability from underground storage of about *23 percent* of its domestic requirements on a peak day. The result is an 18 percent boost in over-all load factor which is brought to 65 plus percent by use of these facilities.

Further improvement in annual load factor is hoped for when more gas is available in the summer for underground storage—although this advantage may be offset by additional saturation in the house heating field. Even this storage facility can not produce the entire answer. The cost can't get to be prohibitive so Company A is certainly interested in every production improvement in gas supply which may become available.

It should also be pointed out that Company A has been able to arrange somewhat its contractual obligations with pipeline companies because a considerable part of its total supply still comes from its own production in the Appalachian area, thus limiting the amount it is necessary to purchase at such high load factors.

Incidentally, with all its natural advantages, Company A does not find the problem of meeting its load factor a simple one. I hope though that you may get some constructive ideas from what it has been able to do.

The production and transmission of natural gas by pipelines over long distances require the sale of gas *in large volumes* in order that it may be sold at reasonable prices. These prices are of immense importance to a natural gas distribution company such as Company A. They are interesting to all because of the approaching availability of natural gas in many manufactured gas areas and because this price feature or cost of gas will play an important part in the solution of the whole problem.

Typical gas supply contracts recently negotiated with pipeline companies delivering gas from the southwest, provide for a *minimum* load factor of 75 to 80 percent. The disposition of these large volumes of pipeline gas by the distributor can come through two sources—space heating and industrial use.

The low annual load factor of the domestic business precludes the possibility of anyone buying a gas supply from a pipeline for domestic use only at anything like reasonable prices. This load requires a counterbalance; hence the reiteration of our main theme—the need to fit in industrial sales.

The domestic user has an important stake is the development of industrial load.

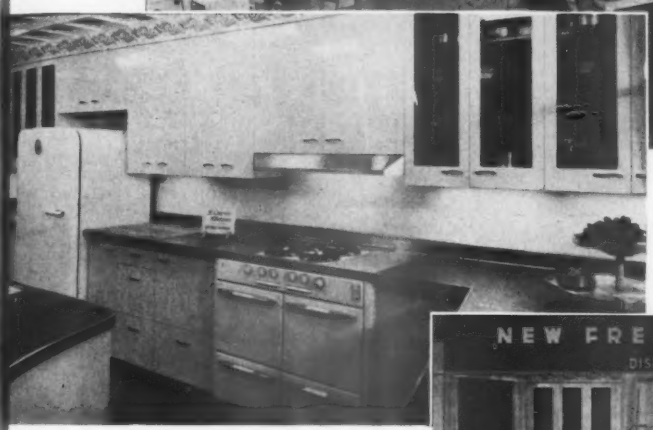
I realize that this illustration based on Company A doesn't actually help the company which has no natural gas production, no pipelines, no natural storage. But the problem exists and it must be answered. We must study and apply to our own companies the plans now being developed by research and experiment for increasing the productivity of our present facilities or for the building of new plants. The fundamental problem is one of supply when you want it and I sincerely believe that research must supply the answer.

If the answer, generally, lies in industrial sales then let me repeat you must meet the demand. If the gas becomes indispensable to industry it must be available in sufficient supply to meet the needs. Large-scale unemployment must be avoided if due to diversion to other demands. Care must be exercised in contracting for such industrial sales. Overselling this failure to measure the potential is as bad for everyone as failure to sell at all.

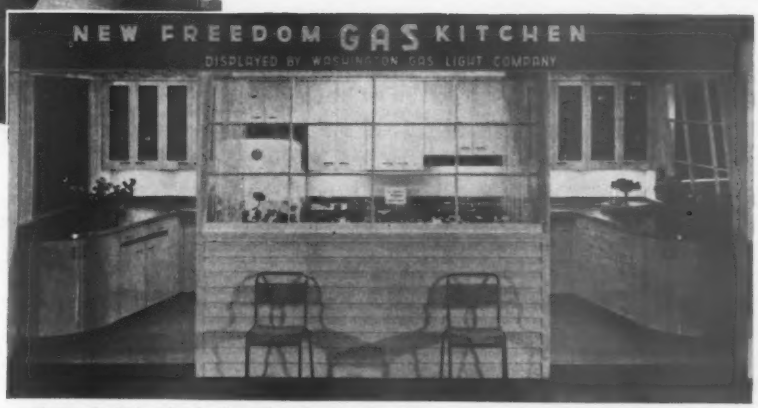
Building an industrial load is a large-scale opportunity— even a necessity, but it is also a large-scale responsibility. The record of the gas industry is proof that no job is too big to be undertaken.

## California ties in with range drive

**Everything from cookbooks to pot holders is included among the sales aids offered by Southern Counties Gas Company to dealers in support of the A. G. A. fall range campaign. L. R. Johnson, company sales promotion representative, calls attention to some of the material for dealers**



General view of exhibit area sponsored by Washington Gas Light Company at the Home Show (above). Side view of the "pink" kitchen equipped with modern gas range and gas refrigerator (left)




Custom-built St. Charles "pink" kitchen in its exhibit area at the Washington Home Show

# Washington stars at home show

Vast crowds totalling more than 80,000 visitors attended the second annual Home Show Exposition in the National Guard Armory in Washington, D. C. in 1948. One of the features which attracted the most visitors and greatest comment was the giant display sponsored by the Washington Gas Light Company.

Under the direction of Roger A. Gordon, director of sales, the company presented one of the most successful exhibits it has ever held. Recognizing the public's deep interest in home ownership ideas, the gas company display area showed the most modern manufacturer equipment, pointing out with unmistakable emphasis the features of modern gas service. In addition to the latest models of gas appliances, the company's exhibit featured full-scale and miniature model kitchens in a variety of arrangements.

Most prominent of these was the popular "pink" kitchen. The Washington Gas Light Company has engaged in promotion of New Freedom Gas Kitchens in the past, but its displays at the Home Show were so successful that the company plans for the future an extensive promotion which will feature the most advanced New Freedom Gas Kitchens.

Luncheon meeting in Chicago (left) of A. G. A. Technical Advisory Committee, F. J. Pfluke, chairman, with sponsors of projects at the Institute of Gas Technology, Chicago, Ill., I. G. T. staff workers and guests

Discussing two projects (right), gasification of oils in the presence of fluidized solids, and the gasification of pulverized coal in suspension: (l. to r.) P. L. Covell, C. C. Russell, H. C. Jones, W. J. Merwin, J. F. Mitchell, A. C. Sedlachek, project chairman; E. S. Pettyjohn, I. G. T. director; O. P. Brysch, F. J. Pfluke, TAC chairman; R. H. Phil ips, G. F. Tyler and C. G. von Fredersdorff

# TAC aids production research

**A PAR activity** Last issue the MONTHLY visited the Gas Production Research Committee's first meeting of the new research year. Inspired by that trip, this reporter decided to probe still deeper into the work of the gas industry's nicely balanced research machinery.

One of the most important cogs in this machinery is the American Gas Association Technical Advisory Committee or "TAC," comprising 18 outstanding technical minds. This capable "right hand" of the Gas Production Research Committee studies and reports on contemplated projects, and in addition acts as technical "watchdog" over current work.

The first good excuse for a visit to the Technical Advisory Committee in action came on November 17 when TAC Chairman Fred Pfluke called his committee together for a two-day session at the Institute of Gas Technology in Chicago.

We moved our cameras into an out of the way spot and watched and listened as TAC and project supervising committees went to work.

Twenty-three gas company executives and guests from companies in New York, Baltimore, Minneapolis, Chicago, and other cities vigorously attacked the ambitious agenda. Supervisory groups and I.G.T. staff workers threshed out mutual problems involving current work on November 17. The following day, chairmen of the supervisory committees reported to the Technical Advisory Committee.

Project after project was discussed, ranging from coal gasification to organic sulfur research. Work slated for the new year also came in for careful attention.

When the smoke finally cleared, a concentrated report was ready, complete with suggestions for further study. This was handed to the administrative body, the Gas Production Research Committee, at a meeting in New York on December 10.

In its capacity as advisor, TAC is concerned primarily with technical objectives. Here are some of the important projects and objectives which were covered at the Chicago meeting:

**Two projects** are sponsored by R. H. Philipps, Jr.—Fluidization gasification is aimed at determining possibilities of the fluidized technique in the continuous production of gas.

Coal gasification has as its goal the development of a base-load process for the continuous production of low B.t.u. gas from low-grade fuel.

**Reactions of carbon-oxygen and steam,** sponsored by John H. Wolfe—The basic reaction of a large portion of the gas business is the gasification of solid fuels. Little was understood of the mechanism of the water gas reaction producing carbon monoxide and hydrogen, and this project was designed to obtain more information.

In the picture at top right are: Sidney Katz (left), A. J. Rudnitski, A. A. Orning, T. L. Robey, R. R. White, J. D. Parent, D. A. Vorum, J. S. Foster, L. L. Newman. Dr. Channing W. Wilson, chairman, is not shown.

**Enriching value of oils** for carburetion, sponsored by H. E. Ferguson—A simple means of evaluating gas-making oils is the ultimate aim. This project was set up to study relationship between the physical and chemical characteristics of gas-making oils and their enriching values, together with a determination of the quality and quantity of the liquid by-products of the thermal cracking operation.

Shown in picture at right (second from top) are: Louis Schnidman, chairman (left), E. J. Murphy, E. M. Bliss, H. E. Ferguson, H. R. Linden.

**Organic sulfur research,** R. E. Kruger, sponsor—Designed to aid the development of economical processes for removing organic sulfur from gas.

See third picture from top: Left to right, C. Tsaros, Dr. W. J. Huff, H. Hakewill, Dr. N. K. Chaney, and Dr. E. W. Guernsey, project chairman.

**Catalysts for gaseous reaction,** sponsored by E. G. Boyer—Use of catalysts has so widened the horizon of many industries that this project was initiated to study their use within the gas industry. Research to date has been limited to reactions included in the catalytic reforming of hydrocarbons.

Examining equipment in bottom picture at right are: C. H. Riesz (left), E. C. Ray, R. B. Paquette, E. J. Murphy, chairman, F. H. Dotterweich, and H. A. Dirksen.

# National gas water heater drive opens

With two million units in 1949 as the goal, thousands of outlets for gas water heaters in cities, towns and villages across the nation are "kicking off" in the twelve-month "Court of Flame" sales promotion program which began officially January 1, 1949 under the sponsorship of the Gas Appliance Manufacturers Association. Important impetus to the "Court of Flame" program has been provided by the 1948 American Gas Association program "For Hot Water Magic Gas Has Got It," which was activated with the cooperation of gas water heater manufacturers.

Details of the comprehensive dealer sales drive which will enlist the supporting action of practically everyone having anything to do with automatic gas water heater sales in the United States, have been made public by J. F. Donnelly, chairman of the sales promotion committee, Gas Water Heater Division, G.A.M.A.

The project, designed especially to up-grade the sales of top quality, adequately-sized gas water heaters, is backed-up by the biggest national advertising campaign yet conducted by G.A.M.A. the American Gas Association and the manufacturers.

Equitable opportunity for all types of dealers, large and small, to win hundreds of valuable awards to be presented quarterly and at the end of 1949, has been provided for in the competition program. Two Buick super sedans are the top grand prizes.

"This is truly an all-out, all-inclusive sales drive to tell all America that 'For Hot Water Magic—Gas Has Got It,'" Mr. Donnelly said. "No one is being neglected. The consumer will be educated on the wisdom of buying modern automatic gas water heaters to replace his old one or to install a gas unit if he hasn't one. No residential potentials will be overlooked in old homes and new ones. It is a real salesmen's drive for it embraces all retailers, the dealer with no salesmen but himself, those with a sales force, and the gas companies and their salesmen."

Each automatic gas water heater will have a tag attached to it to indicate how many contest points will be credited to salesmen. The better heaters will carry more points because the promotion plan emphasizes selling the right size heater to adequately meet home needs.

The top quality automatic gas water heaters of the manufacturers sponsoring the contest will carry a "Court of Flame" symbol-of-quality tag.

When an automatic gas water heater is sold the tag will be filled out and mailed to contest headquarters. The salesman making the sale will be credited with the prize units indicated on the tag. Prizes for the highest number of prize units reported to campaign headquarters will be awarded in both three-months and twelve-months campaigns.

"Court of Flame" honor award which will be presented to gas companies for sales achievement

The twelve-months campaign is open to every gas water heater dealer salesman or individual plumber or dealer who has no salesmen. The salesman credited with the greatest number of gold tag prize units awarded for sales of "Court of Flame" deluxe heaters throughout the nation during the year will be presented with the 1950 super Buick sedan.

To further spur sales of top quality heaters during the twelve-months campaign other gold tag unit prizes in addition to the sedan are to be $45,000 in U.S. Savings Bonds.

It was announced also that prizes will be awarded every three months for sales of all tagged heaters.

A grand national award of a 1950 super Buick sedan is also being made to salesmen of merchandising gas companies winning the most credits for sales. More than $17,000 in saving bonds will be awarded in the twelve-months campaign for sales of all tagged heaters.

In addition to the twelve-months campaign, gas company salesmen can win prizes of U.S. Savings Bonds every three months. The first three-month campaign closes midnight March 31; the second closes midnight June 30, and the third, midnight on September 30.

At the conclusion of the twelve-months campaign, the gas company in each division credited with the greatest number of prize units for the sale of "Court of Flame" heaters per thousand residential gas meters made on its mains, including dealer sales, will receive bronze trophies—the National "Court of Flame" honor award for outstanding sales achievement.

Local gas heater sales campaigns and promotions to tie in with the national drive are being encouraged by the gas water heater division of G.A.M.A.

Portfolios containing sales and promotional ideas and materials for use in the "Court of Flame" competition contain among other things: sizing charts, posters and plans, ideas for gas companies to set up their own contests for company salesmen, sales training kits, follow-ups, mailing pieces to stimulate plumber-dealer activities, newspaper advertisement mats for local newspapers announcing campaign to local plumber dealers, and sound-slide films for use in sales training.

A salesman will be automatically registered in the campaign when his first tag arrives at contest headquarters.

# LP-gas continues rapid growth

K. W. Rugh (left) and E. O. Mattocks

BY K. W. RUGH*
E. O. MATTOCKS†

*Phillips Petroleum Co.*
*Bartlesville, Oklahoma*

During 1948 the liquefied petroleum gas industry continued the steady growth which it has consistently shown during the past decade. In spite of various obstacles placed in its path the rate of growth has been reasonably uniform. It is estimated that during 1948 the total volume of liquefied petroleum gas marketed will reach a total of 2,600,000,000 gallons—a 29.5 percent increase over the volume sold in 1947. The increase in 1948 in marketed LP-gas over that marketed in 1947 was greater than the total quantity of liquefied petroleum gas marketed during 1942. The 1948 volume is equal to 24 percent of the total LP-gas marketed since 1930.

Estimated volume of LP-gas sold for domestic purposes in 1948 is 1,540,000,000 gallons—an increase of 33.9 percent over that consumed for the same purpose in 1947. The total quantity consumed for domestic purposes in 1948 is greater than the total quantity of LP-gas sold for all purposes in 1946, just two years prior. The large demand for this product for homes, farms, institutions and commercial establishments located beyond the gas mains is clearly indicated.

This domestic requirement is made up of two different demands. The first results from new consumers added during the year who previously have used other types of fuel or whose fuel requirements represent an entirely new demand, such as for a new home. The other demand results from the increased usage by consumers who have had LP-gas installed for some time.

It is estimated that better than 25 percent of the gas ranges produced in 1948 went into the LP-gas market. The demand for LP-gas automatic water heaters and refrigerators continues to increase. Space heating with LP-gas is enjoying a greater demand than ever. All of these demands are the result of the satisfaction which consumers are enjoying from the use of LP-gas. It is estimated that there are now about five and one-half million homes using LP-gas and that one-third of these use LP-gas for space heating as well as for the other household purposes. There are presently installed more than 3,000 bulk plants, a number which is about equal to the number of counties in the United States.

The amount of LP-gas marketed for industrial and miscellaneous uses during 1948 is estimated at 280 million gallons. One of the most rapidly growing uses for LP-gas by industrial plants is for standby to other fuels, generally manufactured or natural gas.

To insure against an interruption of gas supply during peak-load periods, a large number of industries have installed LP-gas as a standby fuel. These installations furnish varying percentages of the total gas load, in many instances supplying complete replacement with mixtures of LP-gas and air. This replacement with LP-gas assures continuity of production with a minimum of concern over burner and furnace operation.

The use of LP-gas in gas manufacturing installations continues its rapid increase. It is estimated that 280 million gallons were used in 1948 for this purpose, an increase of 65.4 percent over 1947. The increased distribution of natural gas throughout the country has in many instances resulted in excessive space heating demands during the win-

Like a row of giant sentinels are these fractionating facilities for LP-gas production

* Manager, Philgas division—sales department.
† Technical Representative, chemical engineering department.

Battery of 30,000-gallon capacity propane storage tanks for use as utility stand-by

ter months. LP-gas is used to a great extent to augment both natural and manufactured gas supplies during peak loads. A controlled amount of LP-gas and air may be mixed directly with manufactured gas without encountering burner operating difficulties, but the reforming of LP-gas to produce a substitute gas is permitting even greater quantities to be used.

LP-gas is used generally not only to feed the reforming units but also to enrich the produced gas to the desired heating value. Large proportions of LP-gas and air mixtures may be mixed with natural gas or in some instances may replace natural gas completely without causing any unusual burner operating difficulties. The installation by utilities of large new standby units or additions to present installations has continued throughout 1948. Almost 400 towns are now served with LP-gas exclusively.

The volume of LP-gas used for chemical manufacture is one of the most difficult to estimate. LP-gas is used as an intermediate product which is processed to some other product, the latter serving as an ingredient of a required chemical. Large quantities of LP-gases in the gaseous form are furnished to chemical companies through pipelines directly from the source of production. In a number of cases, these gases are composed largely of olefins—unsaturated hydrocarbons. It is estimated that 500 million gallons will be used in 1948 for chemical manufacturing purposes, an increase of 20.7 percent over 1947.

During 1948 great results have been accomplished in increasing the storage capacity at consumers' installations. The industry has *(Continued on page 35)*

MARKETED PRODUCTION OF LP-GAS

| Year | Total Sales | | Distribution — 1,000 Gal. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Gallons In Thousands | Percent Increase | Domestic[1] | Percent Increase | Ind. and Misc.[2] | Percent Increase | Gas Mfg. | Percent Increase | Chemical Mfg. | Percent Increase |
| 1922 | 223 | | | | | | | | | |
| 1923 | 227 | 24.4 | | | | | | | | |
| 1924 | 376 | 36.0 | *Sale of Liquid Petroleum Gas Confined Primarily to Bottled Gas Business Prior to 1928* | | | | | | | |
| 1925 | 404 | 7.2 | | | | | | | | |
| 1926 | 465 | 15.2 | | | | | | | | |
| 1927 | 1,091 | 134.6 | | | | | | | | |
| 1928 | 4,523 | 314.6 | 2,600 | | 400 | | 1,500 | | | |
| 1929 | 9,931 | 119.6 | 5,900 | 126.9 | 1,500 | 275.0 | 2,500 | 66.7 | | |
| 1930 | 18,017 | 81.4 | 11,800 | 100.0 | 2,200 | 46.7 | 4,000 | 60.0 | | |
| 1931 | 28,770 | 59.7 | 15,295 | 29.6 | 7,172 | 226.0 | 6,303 | 57.6 | | |
| 1932 | 34,115 | 18.6 | 16,244 | 6.2 | 8,167 | 13.9 | 9,703 | 53.9 | | |
| 1933 | 38,931 | 14.1 | 16,626 | 2.3 | 13,987 | 71.3 | 8,318 | —14.3 | | |
| 1934 | 56,427 | 44.9 | 17,681 | 6.3 | 32,448 | 132.0 | 6,298 | —24.3 | | |
| 1935 | 76,855 | 36.2 | 21,380 | 20.9 | 47,894 | 47.6 | 7,581 | 20.4 | | |
| 1936 | 106,652 | 38.8 | 30,014 | 40.4 | 67,267 | 40.4 | 9,371 | 23.6 | | |
| 1937 | 141,400 | 32.6 | 40,823 | 36.0 | 62,610 | [3] | 11,175 | 19.3 | 26,792 | |
| 1938 | 165,201 | 16.8 | 57,832 | 41.7 | 62,694 | 0.0 | 12,386 | 10.8 | 32,299 | 20.5 |
| 1939 | 223,580 | 35.3 | 87,530 | 51.4 | 93,723 | 49.4 | 15,435 | 24.6 | 26,892 | —16.7 |
| 1940 | 313,456 | 40.2 | 134,018 | 53.1 | 124,482 | 34.5 | 20,285 | 31.4 | 34,671 | 29.0 |
| 1941 | 462,852 | 47.7 | 220,722 | 64.7 | 172,669 | 38.6 | 25,255 | 24.5 | 44,206 | 27.5 |
| 1942 | 585,440 | 26.5 | 303,857 | 37.3 | 197,149 | 14.3 | 31,366 | 24.2 | 53,038 | 20.0 |
| 1943 | 675,233 | 15.3 | 344,962 | 13.7 | 237,396 | 20.2 | 37,518 | 19.6 | 55,356 | 4.4 |
| 1944 | 898,071 | 33.0 | 445,617 | 29.0 | 254,590 | 7.3 | 45,879 | 22.3 | 151,985 | 175.0 |
| 1945 | 1,067,979 | 19.0 | 533,262 | 19.7 | 256,577 | 0.8 | 53,849 | 17.4 | 224,291 | 47.5 |
| 1946 | 1,410,370 | 32.1 | 758,466 | 42.2 | 253,745 | —1.1 | 86,660 | 61.0 | 311,499 | 38.8 |
| 1947 | 2,008,262 | 42.4 | 1,150,538 | 51.7 | 274,125 | 8.0 | 169,332 | 95.4 | 414,267 | 33.0 |
| 1948 | 2,600,000 | 29.5 | 1,540,000 | 33.9 | 280,000 | 2.1 | 280,000 | 65.4 | 500,000 | 20.7 |

[1]Household use plus other requirements by these customers such as irrigation pumping, tractor fuel, flame weeding, chicken brooding and similar uses. Included also is LP-gas sold by domestic distributors but used for industrial purposes, internal combustion engine fuel and for gas manufacturing purposes.
[2]Includes LP-gas sold for fueling internal combustion engines.
[3]Not comparable due to segregation of chemical manufacturing.

*Remarks:* In this table total sales for all years except 1948, were obtained from U. S. Bureau of Mines reports. Distribution for the years 1931 to 1947, inclusive, was obtained from the same source. All other volumes were estimated by the writers. The total sales volume includes all LP-gas (propane, butane and propane-butane mixtures) when sold as such. Until 1944 the sale of pentane when sold for any purpose other than motor fuel blending was included. Since then it has been excluded. It does not include butane when blended with heavier petroleum fractions for motor fuel purposes. Intercompany sales transactions such as purchases of LP-gases by one company from other companies and resold as LP-gases have been eliminated in order to avoid duplication of sales figures. The data do not reflect sales of LP-gases used directly by the producer at the point of production for fuel polymerization, solvent de-waxing, etc. Neither do the figures include sales of hydrocarbons to plants manufacturing synthetic rubber or aviation gasoline or their components.

# Portland builds a modern sales approach

The author who is active in A. G. A. sales work


BY JOHN A. HILLER

*Sales Manager*
*Portland Gas Light Co.,*
*Portland, Me.*


This article has to do with the operation of and results obtained from an outside sales group. The conclusions drawn from the results obtained would apply to any selling activity, whether heating were included or not.

I should like to emphasize the fact that, since I joined the Portland company on January 1, 1940, we have never been out of the appliance business. In our poorest year during the war, which was 1943, we installed 721 appliances totalling $89,139. We have never been without a sales organization, small to be sure, even during the war period.

Presented in Boston, Mass., on November 5, 1948, at joint meeting of the Sales Managers Conference and of The Manufacturers Division, The New England Gas Association. Mr. Hiller is second vice-president, N.E.G.A.

At the close of business in the year 1946, we had installed 1,756 appliances totalling $306,000. Our outside organization that year consisted of three men—one veteran domestic salesman, one commercial-industrial heating man, and one combination salesman and store manager working out of a branch offce.

At the time, we had a large backlog of unfilled appliance orders—refrigerators alone totalling approximately 600. We had certainly achieved the all-time high in dollar volume—our largest previous year in the company's history having been 1941 with a total of $238,997. Our merchandise and jobbing profit totalled $47,487.

However, in the face of this favorable situation, we did not allow ourselves to be lulled into a false sense of security. We were enjoying a tremendous floor traffic but it seemed logical to assume that our competitors were in the same position and that many people visiting our stores were in all probability visiting our competitors as well.

It was our belief at this time that floor prospects should be followed up aggressively and that it was high time that our customers were being contacted once again by a company representative.

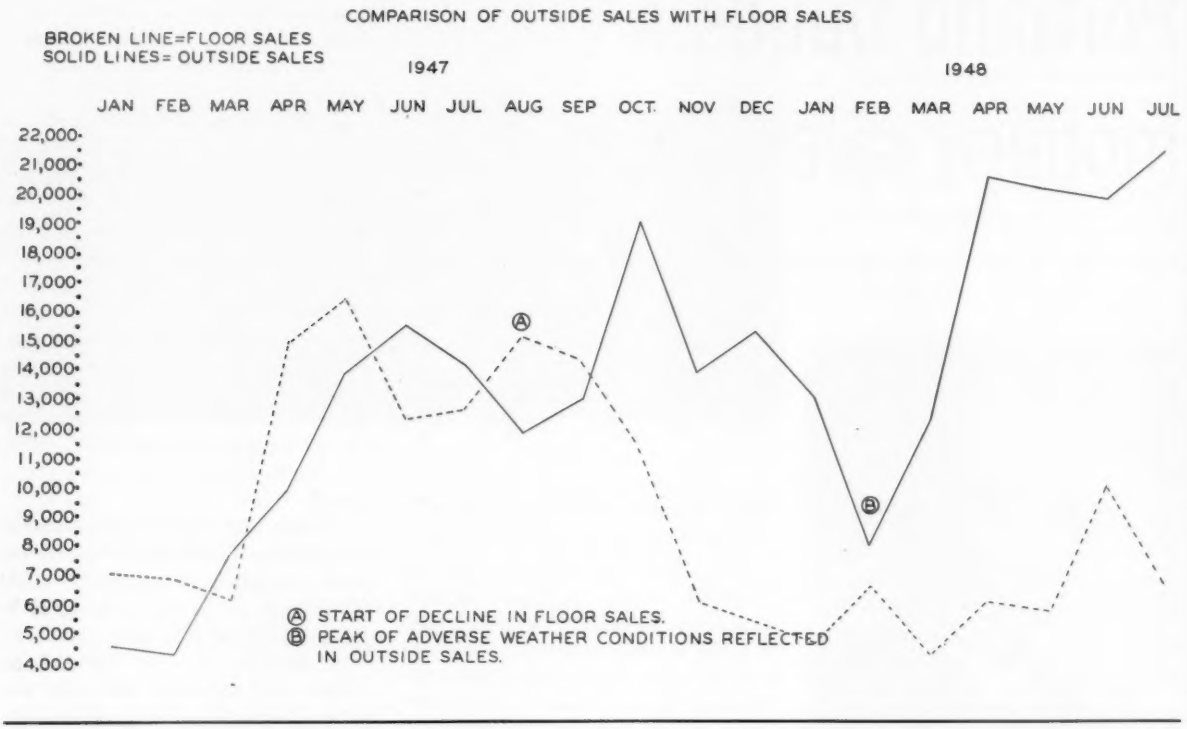
Our merchandise and jobbing profit for the year contributed a much-needed substantial percentage to the company's net. Although the addition of a carefully selected, trained, selling group would unquestionably increase our new business expense, we felt that its activities might create sufficient additional business to increase rather than decrease our merchandise profit. Our assumption in this respect proved to be correct. New business expense for the year 1946 had totalled $23,495. Report No. 4 of the American Gas Association Post War Planning Committee emphasized the point that "there exists a base or minimum new business expense in all companies." As you can see, we were no exception to this rule.

As our compensation plan provides for a nominal base salary and commissions, and as such commissions are chargeable to merchandise and jobbing, it was obvious that the addition of sales personnel would increase new business expense only by the amount of salesmen's salaries, provided great care was exercised in seeing that any commissions paid to them were on business actually closed in the field. In other words, our backlog of existing orders was not turned over to the outside salesmen, but was handled by our office personnel.

We felt also that it was inevitable that the time would come in the not too distant future when floor traffic would fall off, and we were determined to be prepared for that eventuality.

By February 1, 1947, we had recruited four additional men who met the requirements of the Servel selection plan. The A.G.A. sales training course was purchased and presented to all sales people, both outside and inside, over a two-week period. During these two weeks, the outside men were treated as students and received intensive sales and product training with the assistance of a number of our leading manufacturers. Considerable time was also devoted to the over-all operation of the company. Each man was given several days in the

The Portland company followed up floor demonstrations such as this with additional contacts




field with a key serviceman so that, at the end of the period, he would be properly equipped to contact the public intelligently as a company representative.

As a result of some 12 years of experiment with various types of canvass or customer appliance survey records, a visible record card was designed for use in our office equipment. The lower or visible portion of this card is coded to show the types of appliances in use, their approximate age and condition, the fuels used, whether the home is owner- or tenant-occupied, and whether or not the customer is an active prospect.

Eighteen cabinets were purchased, providing sufficient capacity to accommodate a card for every meter on our lines, subdivided into salesmen's districts. Our goal was to provide a record which would make it possible, by running through a series of trays, to pick out instantly, for example: users of ice refrigerators, users of old electric refrigerators in fair or poor condition, users of obsolete ranges in poor condition.

After their preliminary training, the men were assigned to five geographical districts. Once under way, their monthly volume increased steadily. The first full month of operation, their installations totalled $7,637 and by the end of June, this had increased to $15,511 for the month. Their total installations for the year amounted to 807 appliances with a dollar volume of $142,297. These were all domestic retail sales and accounted for 51 percent of total units and 52.6 percent of total dollar volume for this class of business.

I cannot help but wonder what this picture would have been had we chosen the alternative plan of depending upon furniture stores, new, inexperienced, appliance dealers, and plumbers to do this job for us. None of these outlets in Portland had the capital or knowledge required to organize and maintain a competent outside selling force. Of necessity, they must depend largely upon floor traffic for their sales and follow the lines of least resistance—selling the customer electric, oil or gas appliances, depending upon their indicated preference. They have no particular interest in gas, and to believe that they can and will do our selling job for us seems to me to be the last word in wishful thinking.

The break in floor traffic came sooner than we expected. (See Point A on accompanying chart.) For the first nine months of 1947, domestic appliance floor sales were 54 percent of the total, the outside group accounting for the other 46 percent. In October the break came and for the last three months of the year floor sales dropped to 31 percent as compared to 69 per cent for the outside men. This ratio remained the same throughout first ten months of 1948.

As I stated before, we thought we had reached an all-time high in 1946 with a total volume of $306,000. In 1947, however, with increased outside coverage, we achieved a total of $423,000 in appliance sales. This result was achieved without selling house heating.

During the first seven months of this year we continued to roll along merrily. By July 31, merchandise and jobbing totaled $222,387 as compared with $220,526 for the same period last year. Then the crash came. August sales dropped to $29,396 as compared with $41,938 in the previous year; September's $25,272 compared with $46,870—a decrease of 38.5 percent for the two months' period.

At first glance, this decrease may seem alarming. However, it must be borne in mind that it has merely reduced our *(Continued on page 44)*

*A.G.A. Laboratories' study presents practical data to help designers and installers*

# Improving gas steam tables

BY EARL A. McGEE

*Engineer American Gas Association Testing Laboratories*

An analytical study of current types of steam tables, made under the sponsorship of the American Gas Association Committee on Industrial and Commercial Gas Research, discloses that on the whole insufficient attention has been given to the most effective use of gas as a means of heating this type of commercial cooking equipment.

Whether this condition is due to the desire to reduce costs in a highly competitive field or to insufficient knowledge of gas utilization principles, the fact remains that contemporary factory-equipped steam tables may be provided with gas controls and burners not suited for the application. Others do not have provision for efficient and effective application of gas by the installer. This later condition, of leaving the application of burners to the installer, also has been found to result frequently in the selection of improper gas equipment for the job to be performed and in poor installations from the technical point of view. Many steam tables therefore do not provide as high an operating efficiency as might be desired.

A number of changes may be made to improve this condition. Reconstruction of a representative table so as to provide simple but adequate venting, for example, might well permit savings of as much as 25 percent of the gas required to hold the table at 190 degrees F.

It appears that steam table design has been devoted mainly to improvements in appearance and development of a large variety of top section arrangements. In some instances problems of heat application, aeration and venting have been largely ignored. Since many manufacturers do not have complete laboratory or engineering facilities available, the committee requested the American Gas Association Testing Laboratories to study the problem and prepare practical information which would assist designers and installers. Resulting information is published in Research Report No. 1112, "A Study of the Factors Affecting the Application of Gas to Counter Appliances (Steam Tables)," recently released and available from the American Gas Association Headquarters or the A. G. A. Testing Laboratories.

This report indicates that it is practical to design steam tables to obtain appreciably increased thermal efficiency without necessitating costly and expensive changes. Principal factors to be observed are simple provision of adequate venting and secondary aeration of burners together with the proper selection and placement of burners for the type and size of table involved.

In venting a steam table it is necessary to control effectively the hot gases which give up their heat to the tank and its contents while passing over the heat transfer surfaces. If these gases are not held in close contact with such surfaces, or if the surfaces are too small, much of the heat produced will be lost and efficiency will be low.

In the case of open base cabinets the venting area may be too large, permitting the escape of the flue products before they have fully given up their heat. On the other hand the venting area may be too small, particularly in the case of fully enclosed cabinets. In these instances the flow of flue products is often restricted to the extent that the burner flames are surrounded and smothered by them. A relatively large quantity of hot gases are liberated by the burner and this point is often overlooked. The actual volume of flue products depends upon the amount of gas burned and consequently the venting area must be related to the gas-burning rate for effective performance.

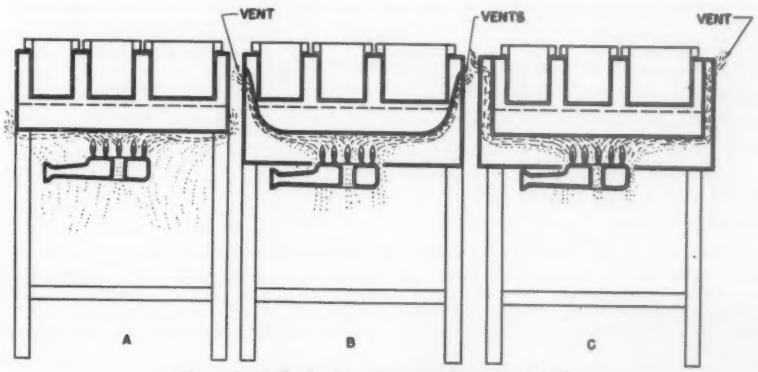



Figure 1. Methods of venting open-base steam tables

A—Heat carried away in products of combustion. Inadequate heating surface. Air supply too great.

B—Vents high enough to allow good combustion. Increased efficiency.

C—Vent area easily controlled. Large heat transfer area. Good combustion. Good efficiency.

Field experience as well as research has shown that a minimum of one square inch of venting area should be provided for approximately each 5,000 B.t.u. per hour of gas input to the burner. This ratio permits sufficient excess air above that ordinarily required for good combustion to insure proper operation under all field conditions normally encountered.

Figure 1 shows methods of venting

open-base tables. Sketch A illustrates how an excessively large amount of air coming in contact with the flames dilutes and cools the flue products in addition to cooling the heat transfer surfaces of the water tank. Provision of a curved heating surface such as shown in Sketch B not only provides better heat transfer but the opportunity to place vent openings at a sufficient height above the burner to permit combustion products to escape readily. The vent opening size is also readily controlled and channels may be provided to keep the flue gases in contact with the water tank.

These objectives may be realized even more readily with a design such as shown in Sketch C where venting height is increased. Combinations of the two are also quite possible. Similar venting principles applied to an enclosed-base type steam table are shown in Figure 2.

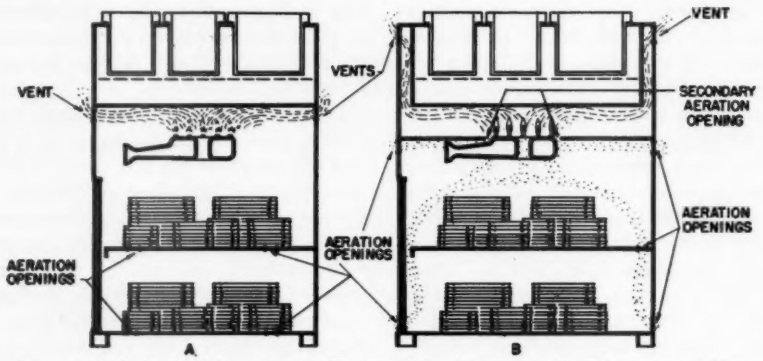



Figure 2. Methods of venting and controlling secondary air flow of enclosed-base steam tables

A—Gas input limited if sufficient venting area is not provided. Poor combustion. Low efficiency. Secondary aeration inadequate when storage space is being used.

B—Sufficient vent area easily provided. Large heat transfer area. Good combustion. Good efficiency. Secondary air flow easily provided. Aeration opening cannot be blocked easily. Aeration openings of one sq. in. for each 2,500-5,000 B.t.u. per hour input, around burner periphery.

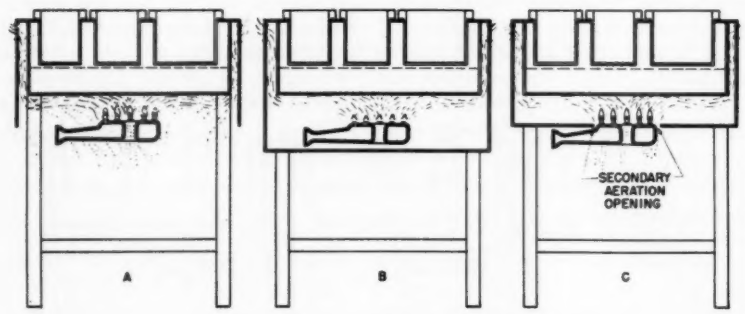



Figure 3. Effects of secondary aeration upon burner performance

A—No means for air control. Excessive secondary aeration. Heat wasted to warm excess air.

B—No aeration openings. Insufficient secondary aeration. Poor combustion. Flames streaming. Outer mantle not defined.

C—Secondary air opening. Aeration plate with openings of one sq. in. for each 2,500-5,000 B.t.u. per hour input, around burner periphery.

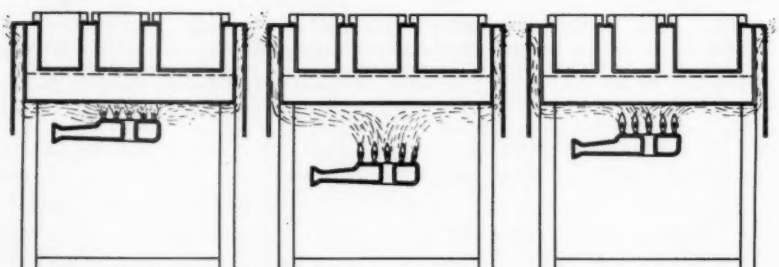



Figure 4. Effects of burner location upon burner performance

A—Burner too close to heat transfer surface. Poor combustion. Low efficiency.

B—Burner too far from heat transfer surface. Low efficiency. Low heat transfer. Heat carried away in the flue gases.

C—Burner properly located.

It will be noted that in Figure 2 control of secondary aeration is also designated. Secondary air is that which is supplied to the area directly surrounding the flame. This air helps to complete the combustion reaction, since only part of the total air needed for the purpose is drawn in through the burner and mixed with the gas as primary air. Openings to admit secondary air are essential to good combustion. However the actual area of openings should represent the minimum which will afford satisfactory combustion with a reasonable margin of safety under field conditions. Excess air beyond this amount dilutes the flue products, cools them, and consequently reduces efficiency materially.

In Sketch A of Figure 2 secondary aeration is difficult to control. The aeration openings shown must be over-sized to allow for their partial blocking when the storage space is fully used. Such blocking may result in making them too small. Sketch B shows a preferable method. Here adequate openings in the cabinet are made to avoid any blocking, and secondary air may be channeled to the burner flames as desired. Control is effected by the metal plate across the burner section, creating a combustion chamber. The opening in the plate can be accurately sized for the proper amount of air flow. The correct opening size provides one square inch for each 2,500 to 5,000 B.t.u. per hour gas input to the burner, the actual size depending upon the ability of the openings to supply and direct secondary air to the burner flames. Openings should be well below the top of the burner.

The effects of excess and insufficient secondary aeration are illustrated in Figure 3. Sketch A shows effect of too great secondary air flow or over-ventilation. Sketch B shows how insufficient air causes the flames to stream, causing poor combustion and in extreme cases, carbon deposition. Sketch C illustrates a properly designed aeration plate with air evenly distributed to the flames.

Proper selection and placement of burners for a given steam table is perhaps the most important factor that has been largely neglected in the past and one which contributes materially toward unsatisfactory *(Continued on page 44)*

Courtesy laundry laboratory, Good Housekeeping Institute

# Put the detergents to work

BY HELEN W. KENDALL

*Household Equipment Editor*
*Good Housekeeping Institute*
*New York, N. Y.*

A discussion of detergents is one which can be approached from many ways. Obviously there is the chemical side which is very complex and which I would not presume to tackle. I am sure, however, that readers are more interested in the use of detergents as a part of everyday living, with special emphasis on laundering and dishwashing.

In any cleansing process whether it is laundering, dishwashing, floor scrubbing or shampooing, the first problem is to bring about contact between the soiled surface and the cleansing agent. This is not easy because the two are usually incompatible. If it weren't for the fact that most soil is greasy or oily, we might get rid of it with water alone. But oil and water do not mix, so soil can neither be loosened nor floated away without a mixer. There are many types of mixers. Soap is one and so is a synthetic or soapless cleaner—which is the topic of my discussion.

Soapless or synthetic cleaners are actually test-tube products. In household use for less than 15 years, they have cut a surprisingly wide swathe in the cleaning field. It seems to me their success can be attributed to one thing—the fact that they work well in hard water.

As you all know, bathtub ring, gray washes, suds dying down in the dishpan are traceable to the same cause—hard water. When soap is used in hard water it combines with the calcium and magnesium in the water and forms a curd. This curd is sticky, insoluble, almost impossible to rinse out completely. In other words, its a nuisance wherever it occurs.

Probably the most common hard water trouble in women's experience comes in washing clothes. Sometimes they make no attempt to use the regular water supply and go to all lengths to catch and store rainwater.

Today of course thousands of mechanical water softeners are being installed in homes that have hard water, which is

Helen Kendall (above) discloses why "detergent" is rapidly becoming a common household word

Presented at Home Service Round-Table during 1948 American Gas Association convention in Atlantic City, New Jersey.

further proof of this universal problem. But in your contacts with housekeepers you are bound to come smack up against the problem of washing clothes where you have nothing to turn to but compounds that alleviate the hard water situation.

Right here may I point out some of the reasons why the problem of hard water is more evident with automatic washers than with the wringer type washer. In hand rinsing and wringing, the scum or curd which forms can be flushed off each article as it is doused up and down in the water. In an automatic washer where the water is spun out, the curd which forms in the rinse becomes entangled or attached to the fabrics during the rinse and the spin. If loose lint is present in the clothes the problem is aggravated because the sticky scum combines with the lint and adheres fast to the fabric. What a terrific problem for all of us to face who are trying to teach women the advantages of automatic washing. Actually the automatic washer must take the brunt of troubles which should not be in any way attributed to it.

## Water softeners

Let's go back for a moment to non-automatic washers. These are of two general types—wringer washers and spinner washers. Prior to the development of sequestering water-softening compounds like Calgon and the new synthetic detergents, manufacturers shied away from selling spinner washers in hard water areas for the very reasons I have mentioned in connection with automatic washers. So for a time, manufacturers of automatic washers experienced the same hard water troubles on a large scale as spinner manufacturers did whenever washers went into a hard water area.

With the increased sale of automatic washers, it's no wonder that there has been a mad scramble for a product or products that would bring some relief to hard water difficulties. As you all know, one of the most efficient water softening compounds is a product sold under the trade name of Calgon. Calgon, of course, is used in conjunction with soap.

This is such an excellent product that the only drawback we've heard women express is its cost. If you run into this criticism you might suggest reducing the cost by using it in the first rinse water, for it is here that it does the most good. However, with an automatic washer this means a return to the washer and careful timing to catch the rinse cycle, so products which are put into the washer in the wash cycle and rinsed out in the normal process are becoming more and more popular.

I am referring now to what we call built detergents. Along with their use, however, have come certain problems. First, women must be convinced that the need to use a special product is not the fault of the appliance they have purchased. While it may be an altruistic attitude, it is my feeling that the time to do this is before the sale is made and not after.

The complaints that come to us go something like this—having purchased a washer of high unit cost, they must buy special products in order to get satisfaction, and this comes as a surprise. Correction of a situation like this is going to require the combined efforts of all who in any way influence the best use of mechanical appliances.

In our laundry laboratories at Good Housekeeping Institute we have done a lot of work in evaluating some of the new products for use in laundering. It has helped us to make some definite conclusions of our own about their use in connection with automatic washers particularly.

To avoid confusion, I would like to mention these products by their brand names as I refer to them. We are generally familiar with Tide, All, Spin, Super Fun Soapthetic, Noctil. These products are in various stages of distribution though they all come close to having national distribution. All and Spin are non-sudsing detergents particularly formulated for washers which are susceptible to over-sudsing.

Super Fun Soapthetic and Noctil, too, have been developed for automatic washers and are being promoted as automatic washer detergents. Super Fun Soapthetic is a soap-synthetic combination (the only one we know of) while Noctil is intended for use with soap. Tide, on the other hand, is a fast and copious sudsing product which is an excellent detergent but one which must be used with some discretion in automatic washers because of its sudsing qualities as I shall explain later.

(1) The use of a good built detergent is just as applicable to non-automatic washers particularly of the spinner type, as it is to automatic washers.

(2) My next suggestion has to do with the quantity of these soapless detergents necessary for good results. Quite frequently, a synthetic detergent is used following a relatively long use of soap in the washer. Because of this, there may be a deposit of soap on the sides of the washer and in the clothes themselves so that a very small quantity of the detergent may whip up a live suds.

It may be that this first wash will be satisfactorily cleaned but as the use of the synthetic is continued, the quantity used at first will not be sufficient to emulsify the grease and the result will be small black bits which are commonly called "grease balls." The answer to this problem is to increase the quantity of the detergent.

(3) If the detergent used is of the non-sudsing variety, you can only follow directions on the package. Here again if you get grease balls or scum, increase the quantity.

(4) The efficiency of a synthetic detergent is more quickly seen in hard water than in soft. For this reason, a continued use of a synthetic in soft water is usually needed before differences in whiteness retention can be noticed. In other words, don't pass judgment on a product too quickly.

(5) In our experience, the product Tide, which you probably know has almost reached a national distribution stage, is comparable with good built soaps in ability to remove soil. However, it is too quick sudsing for automatic washers of the cylinder type in some areas. We have found it to give excellent results with some of the agitator or modified type automatics but in using it in a cylinder something must be done to cut the suds. We often combine it with equal parts by volume of a built soap. This recommendation came directly from the manufacturer of the product, in answer to specific problems and I see no reason why home service women should not recommend it in

## Capitalism

● Let's not have critics of capitalism talking it down when it's the only system in the world which enables a man to win $525 on the radio by identifying the language, starting with "E," which is spoken in England.

*—Bill Vaughn, Kansas City Star*

their post-sale demonstrations if they find it satisfactory.

(6) Please don't overlook the emphasis I have placed on synthetic detergents with *proper builders*. The development of these products followed that of detergents without builders such as Dreft, Vel, Breeze, Savex, etc. This latter group are not washing machine products, nor do they claim to be. They are fine-fabric and hand-dishwashing detergents for use in hard water and are promoted as such.

The other major use of synthetic detergents in cleaning is of course, dishwashing. I am sure you are as familiar as I with the advantages of the so-called pure synthetic detergents and their place in hand dishwashing. Again I refer to the Dreft, Vel, etc., group. These products have outstanding advantages over built products for dishwashing and the washing of fine fabrics. I wonder if you are aware that they are usually somewhere near neutral in reaction and exceptionally kind to color in wool. But your interest is probably more in detergents which are suitable for dishwashing machines.

The situation in dishwashing machines is one which has no parallel in household appliances as far as I know, because satisfactory use of the machine is absolutely dependent upon two things —hot water and a suitable detergent. Unfortunately, there are few products available for use in dishwashing and these few are not too widely distributed.

My guess is that sales in dishwashers may be running ahead of detergents. But this cannot be tolerated long. Manufacturers of dishwashing detergents have many problems. The detergent must be non-sudsing so as not to interfere with the action of the dishwasher, it must loosen food soils of greasy nature particularly, it must dissolve quickly and reduce surface tension so the dishes will dry quickly and completely. The two detergents with which we are most familiar are Calgonite and Chat, but there are others coming along—Electrasol, for example, which we have been told is very satisfactory.

There is just one more thing on this whole subject of detergents. I know from an editor's point of view at least, that for some time, years perhaps, we dodged the use of the term "detergent" because of the feeling women wouldn't understand what we meant.

We don't do this anymore because our reader's mail and conversations with women show that "detergent" is becoming more and more a part of their vocabulary, and some show a surprising knowledge of the differences between a soap and a detergent. I pass this along with the hope that it will prove to be an encouragement as you run into situations where a detergent needs to be recommended.

# Industrial relations round-table

Prepared by A. G. A. Personnel Committee

● **"How Can the American People Be Given A Better Understanding of Our Economic System?"** is the title of a report of the Joint Association of National Advertisers—American Association of Advertising Agencies Committee on Improvement of Public Understanding of Our Economic System. The booklet was printed and distributed as a public service by *Time*, the weekly news magazine, 9 Rockefeller Plaza, New York 20. Any company planning a program to present facts regarding the American system to its employees will benefit by the results of the committee's work. Further information and materials, including slide films and a "plan for action" kit, may be obtained from the Joint Committee, 420 Lexington Avenue, New York 17, New York.

● **Defenses against suits for overtime pay** have been upheld by the Supreme Court in the Mutual Life Insurance Case. These defenses apply to all suits for back pay under the Wage-Hour Law as well as to claims under the portal-to-portal law. The sections which have been upheld by the Supreme Court provide that no employer is liable for back pay if he can prove he acted in good faith or relied on rulings by a Government agency.

● **Improved supervision** is the aim of a pocket-sized booklet published by the National Foremen's Institute for employees charged with the responsibility of supervising men and women. It is devoted to the creation of better human relations among the individuals who work together under one supervisor. Prepared in popular style with illustrations, the booklet uses short, punchy text and cartoons to make its important messages interesting and easily understood. A dozen suggestions are treated separately. Here are a few of the suggestions discussed: (1) treat them with dignity; (2) make them feel they belong; (3) give them a chance to work out things on their own initiative; (4) tell your people in advance about changes that will affect them, and (5) tell your people how they are getting along. Price per copy is 25 cents, with discounts for quantities. Title is "Who, Me? . . . Pointers in Job Management." National Foremen's Institute, Inc., Deep River, Connecticut.

● **Maintenance of membership** is subject to the same restrictions as the union shop under the National Labor Relations Act. This statement has been made by the N.L.R.B. in connection with a case involving General Electric Company. It is the first official word on this point which the Act itself did not make clear.

● **"Wage Structure In Electric and Gas Utilities, 1948"** is a bulletin prepared by the Bureau of Labor Statistics, U. S. Department of Labor. It is designated as Series 2, No. 67. The information is based on surveys made in March-April 1948. In addition to covering wages, it provides comprehensive "fringe" data.

● **Other recent publications** of the Bureau of Labor Statistics include the following:

Bulletin 908-5 Collective Bargaining Provisions; Discharge, Discipline, and Quits; Dismissal Pay Provisions. 63 pp.

Bulletin 908-6 Leaves of Absence & Military Service Leave.

Bulletin 908-7 Promotion, Transfer and Assignment, Lay-Off, Work Sharing and Re-employment.

Bulletin 908-8 Collective Bargaining Provisions; General Wage Provisions.

Bulletin 908-9 Collective Bargaining Provisions; Wage Adjustment Plans.

Copies of B.L.S. publications may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

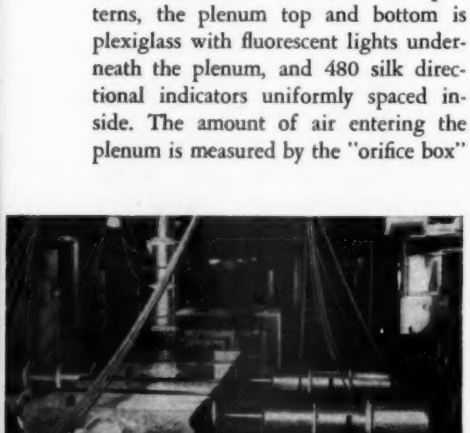
● **A grievance procedure** established by contract does not protect the employer against a strike resulting from a grievance in the absence of a specific no-strike pledge in the contract. This was a 4-1 decision of the N.L.R.B. recently. A union apparently can, therefore, ignore the contract grievance procedure under the stated conditions if it so desires.

# Research at work

## Air conditioning problems attacked

**A PAR activity** Apparatus shown in the accompanying picture has been developed by the department of mechanical engineering, University of Illinois, for research in the possibilities of simplifying and improving the performance of single air distribution systems supplied by all-year gas air conditioning equipment. Present studies, sponsored by the American Gas Association, are based on a thorough exploration of "box plenums" which indicate possibilities for simplification and corresponding lower cost, with superior performance.

The fully-instrumented, flexible, experimental box plenum illustrated here shows six branch outlets. To permit visual observation of the air-flow patterns, the plenum top and bottom is plexiglass with fluorescent lights underneath the plenum, and 480 silk directional indicators uniformly spaced inside. The amount of air entering the plenum is measured by the "orifice box" in the background, and the amount of air leaving the plenum is measured by orifices in the six outlets. Various baffling arrangements are being fully utilized in this study.



Box plenum test arrangement (looking upstream)

Air conditioning engineers believe that the full use of box plenums, based on a thorough knowledge of their performance, in both summer and winter, will provide means for reducing the cost of all-year air distribution systems in residences, and at the same time provide performances that will give superior comfort conditions regardless of the season. This A.G.A. research project (DGR-2-AC) is sponsored by the Committee on Domestic Gas Research, R. J. Rutherford, chairman, through its Technical Advisory Group for Gas Summer Air Conditioning Research.

Technical liaison is maintained by two members of the Group, H. C. Pierce, Evansville, Ind., and Glenn Zellhoefer, Bloomington, Illinois. The project is being conducted at the University of Illinois by Associate Professor Ross J. Martin and Stanley F. Gilman, under the direction of Dr. N. A. Parker, head of the department of mechanical engineering. In assigning this project to the University of Illinois, the Domestic Research Committee took recognition of the fact that this institution has the most extensive background of heating, air conditioning and ventilating of any research organization in the country.

## Interchangeability report released

The Gas Production Research Committee of the American Gas Association, E. G. Boyer, chairman, has just issued a report entitled "Interchangeability of Other Fuel Gases with Coke Oven Gas." This report, the first of a series, presents data on the interchangeability of 29 substitute or supplementary gases with a base load 0.4 sp.gr. 535 B.t.u. coke oven gas. The work was performed at the A. G. A. Testing Laboratories.

A second report to be issued early this year will present similar information regarding carburetted water gas. A third report will cover mixed coke oven-carburetted water gas, and a fourth report will cover mixed natural gas-blue gas-cracked natural gas-producer gas. The entire work will be summarized in a final bulletin.

Information presented in these reports will be particularly valuable to companies which are currently investigating the possibility of producing and utilizing substitute or supplementary gases to augment their base gas supply during peak load periods.

Copies of the first bulletin may be obtained at $1.50 per copy from the American Gas Association, 420 Lexington Ave., New York 17, N. Y.

## Natural gas hydrate study released

Important information on pipline problems resulting from the formation of hydrates, the kinds of "freezes" in the line, the temperatures at which they occur, experiences of pipeline operators, and the methods used to free the lines, are contained in Monograph No. 8 by W. M. Deaton and E. M. Frost, Jr., U. S. Bureau of Mines.

This new study on Gas Hydrates and Their Relation to the Operation of Natural Gas Pipe Lines has been released by the Bureau as a cooperative project with the Natural Gas Department of the American Gas Association.

In 1934, a paper by E. G. Hammerschmidt revealed that many "freezes" in natural gas pipelines, which seriously effected the capacity of the lines, were caused by hydrates and not water ice and that "freezes" in natural gas lines were not confined to areas of extremely low temperatures. This revelation so excited the interest of natural gas men that work on Monograph No. 8 was begun in 1935 and except for three war years was continued to the present.

Monograph No. 8 is on sale through the Natural Gas Department, American Gas Association, 420 Lexington Avenue, New York 17, N. Y., priced at $1.00 per copy for members and $1.50 per copy for non-members, without quantity discount.

*An analysis of present federal income tax treatment as applied to public utility activities*

# Deferred credits and reserves

BY LEO A. DIAMOND

*Member, LeBoeuf & Lamb*
*New York, N. Y.*

Leo A. Diamond

More than a third of a century has elapsed since the present federal income tax system was created under the authority of the Sixteenth Amendment to the Constitution. During that not insubstantial span of years, much water (not too clear at times) has run under the bridges of federal income tax law and administration, relating to the concepts of what constitutes income and when it shall be taxed.

Considerable development of basic and fundamental postulates has perforce occurred but numerous sectors of federal income tax law and administration one would have thought quiet stil remain plagued to this day by confusion, indecision and often unjustifiable arbitrariness. One of these sectors involves the treatment of deferred credits and reserves. The purpose of this discussion is to examine summarily certain aspects of that treatment with attention to problems affecting public utilities.

I. The present federal income tax system is founded primarily on the basis of computing and assessing tax annually. Nothwithstanding many obvious economic hardships often occasioned by such a system, it has been sustained over and over again by the Supreme Court of the United States.

From time to time Congress, however, has seen fit to tinker with the annual basis of computing income and assessing tax—generally to ameliorate what it believes to be real hardships. For example, carry-backs and carry-overs of certain credits and business and capital losses are allowed to level off peaks of income fortuitously occurring in a given year or years. Also, in the case of certain compensatory income of individuals, earned over a period of 36 months or more, impact of high surtax rates is lessened by a form of spreading.

Departures from the general rule of annual computation and assessment have been, however, deliberately limited by Congress to few in number. Thus, as yet, there is no general averaging of income over several years as is the case, to a more or less degree, under some foreign income tax systems.

The reason is not far afield: the essence of any reasonable system of taxation, the Supreme Court has observed, is not only the production of revenue but the production of revenue in ascertainable amounts and at regular intervals. Budgetary requirements are stark (and in a sense brutal) realities, regardless of the niceties of an ideal system of taxation. To date at least, Congress has not been convinced of the wisdom of abandoning generally the annual basis because it is not certain that such abandonment might not seriously jeopardize the revenues, especially in times when governmental needs are heavy and steadily expanding.

The foregoing brief analysis explains in great measure a characteristic of the federal income tax system which, though ever present, is not readily apparent on superficial examination and yet which vitally affects the subject under discussion. That characteristic can be best described succinctly by the generalization that, exceptions conceded, the statutory pattern, supplemented by judicial support, is to accelerate the taxation of income but to defer the allowance of deductions.

Admittedly, much can be said for the view that there is often conscious administrative and judicial striving—as distinguished from mere lip service—for synchronizing items of income and items of deduction to avoid grotesque distortions during any given taxable period or periods. Nevertheless, it is not surprising that he who attempts to justify postponing the taxation of a receipt or to justify presently taking a deduction has a much harder task than he who insists on present taxation of a receipt or on deferment of a deduction.

## Hard row to hoe

The vagaries of annual taxing of income are such (i.e., variation in rates, rise and fall in income) that some time it is the taxpayer and some time the Commissioner of Internal Revenue who has the harder row to hoe. Usually, and especially in periods of falling tax rates, it is the taxpayer who seeks to defer taxation of income and to accelerate deductions. When, however, tax rates are rising, it is the Commissioner who may be found to be attempting avoidance of the statutory pattern.

The acceleration-of-income and deferment-of-deduction attitude has many facets. Two aspects familiar to public utilities, not unlike taxpayers generally, are the doctrines of "claim of right" and of "contested liability."

Under the first, income (e.g., amounts paid by customers of a utility) received without legal restrictions as to use but

● The accompanying article was prepared exclusively for the MONTHLY and is the first of two articles discussing income tax problems. It will be followed in the February MONTHLY by a companion feature "Application of the Life Inventory Method to Income Tax Depreciation" by J. W. Balet, Consolidated Edison Co. of New York, Inc.

the right to retention of which is or may be in serious doubt or dispute (e.g., because of rate reduction proceedings) is nevertheless taxed in the year of receipt. Any refund of that income in whole or in part can be deducted only in the taxable period in which refund is made.

Where, however, a utility had been required to place receipts of contested rates in escrow, it was relieved from paying income tax on such receipts prior to withdrawal from escrow for its own use. Thus in such a case any refund of escrowed payments would not be deductible. Conversely, under the second doctrine, for example, if a public utility should contest the payment of any local tax or any charge by any governmental agency for use of property, deductibility of that payment is delayed to the year in which the contest is abandoned or lost.

## Revisions needed

Full appreciation of the phenomenon of accelerating the taxation of income and deferment of deductions (felicitously described as indicating a "bird in hand" attitude) makes easier the task of understanding the present tax treatment of deferred credits and reserves in the case of taxpayers who report income and deductions on the so-called accrual basis, including generally public utilities. It also makes more intelligible the need for certain legislative or administrative revisions in such treatment.

II. Numerous and tempestuous have been the controversies between taxpayers and the Treasury as to the income tax significance of what may be conceded to have been or are sound (or at least not unreasonable) principles of accounting and of accurate reporting. Battles begun more than 30 years ago have not been entirely stilled. In general, taxpayers have been repulsed for a surprisingly simple reason. The Treasury has been made secure behind its redoubt, fortified by judicial approbation, that the proper determination of taxable income does not depend necessarily on acceptance of any accounting principle, irrespective of its soundness and reasonableness for business purposes generally.

This independence from the demands of accounting concepts manifests itself in forms not unknown to public utilities subject to regulation, national as well as local. Thus, it is well established that a public utility whose accounting methods for regulatory purposes are fixed by law or by a governmental agency having jurisdiction will not necessarily be permitted to rely on such methods for income tax purposes.

Hence, for example, rules of such national agencies as the Interstate Commerce Commission, Federal Power Commission, Civil Aeronautics Board or of local public service commissions and other agencies prescribing accounting methods and procedures have been deemed to be not conclusive on the Commissioner of Internal Revenue, except to the extent they "reflect true income" for tax purposes.

A cardinal principle of accounting is that the income account should not reflect any receipts until and unless earned. That principle has been observed nearly uniformly by the Treasury in the breach. All forms and types of advances—e.g., rentals, royalties, commissions, fees, ticket sales, service charges—have been taxed to the recipient even though the latter had services yet to perform before the advance payments could realistically be said to have been fully earned.

Thus it would seem that customer deposits required by some utilities before granting service might well be subject to tax in the year of receipt even though not yet earned. A significant exception which tends to highlight the general rule is made in the case of subscriptions to a newspaper or periodical where allocation of both receipts and expenses over the duration of the subscription is permitted.

The rationalization of the Treasury's position is that nowhere in the statutory pattern is there any requirement that income must first have been fully earned to be subject to tax. To a large measure that argument is sound, especially when buttressed by strong considerations of fiscal necessity and convenience.

In the face of that argument accounting rules of other governmental agencies must yield. Yet what in many cases aggravates the arbitrariness of taxing unearned receipts is the disallowance of deductions for correlative justifiable expenses or other outlays, except as amortized or spread over several taxable years. Thus, whereas for example, a public utility as lessor of certain property (not presently used in its utility activities) would be taxed on any advance rental in the year of receipt, it would not be permitted to deduct in the year of payment the full amount turned over to the lessee for cancellation of the lease before the expiration of the term.

A transaction common to public utilities is the so-called advance or aid to construction furnished by a prospective customer for new facilities or by an established customer wishing expanded or increased service and requiring additional construction of utility property. Such an advance is usually refundable in whole or in part, depending on the amount or frequency of service utilized by the customer over a stipulated period of time. To date, as far as is known, such advances have not been taxed to the utility.

Allied, of course, with the entire problem of the proper tax treatment of advances or aids to construction is the question of the extent to which the public utility is permitted deductions for depreciation on property constructed with funds supplied by customers. Although the Supreme Court of the United States has definitely indicated that depreciation is not allowed on unrefunded and unrefundable amounts received from customers in aid of construction or as contributions thereto, the last word has not yet been said on the proper tax treatment of the entire problem of such advances and contributions. There is much uncertainty yet to be cleared away.

From time to time certain utilities receive advances from appliance dealers for expenses to be incurred in promotional campaigns. Here, too, the proper tax treatment of such advances has not been definitively established.

## "Reserves" defined

III. Much of the controversy present in tax accounting versus business accounting involves the use and effect of so-called reserves. The Internal Revenue Code itself recognizes only one type of reserve, namely, a reserve for bad debts. Treasury regulations recognize two additional reserves, namely, a reserve for depreciation and a reserve for depletion. In contrast to such limited tax recognition of reserves is the use of many hybrid adjustments generally denominated as reserves for business and accounting purposes.

At the threshhold of any analysis of the tax handling of "reserves," it is proper to pause for an examination of the true meaning of the term. Etymologically, it refers primarily to segregation or setting aside of specific assets for specific purposes. Hence, for ex-

ample, in the strict sense and ironically enough, the Internal Revenue Code does not actually recognize any "reserve" because there really can be no "reserve" for bad debts, depreciation or depletion. No specific assets are set aside for any particular purpose when such a reserve is created or sustained by additions.

Furthermore, and again in the strict sense, there can be, for example, no "reserves" for damages, taxes, contingent liabilities, estimated losses, etc. Thus, it is not without justification that loose usages of the term "reserve" have caused considerable ferment in high places in the accounting profession with respect to accurate and honest financial reporting.

This confusion in what many would regard as the improper use of "reserves" is partially responsible for the unsuccessful attempts on the part of taxpayers to obtain tax deductions for additions to various kinds of reserves. Such additions have covered a myriad of items ranging from reasonably anticipated happenings to most fanciful expectations.

Small wonder then that any tax deduction denominated as a reserve or addition thereto (except in the case of reserves for bad debts, depreciation or depletion) automatically invites most careful scrutiny and examination by the Commissioner of Internal Revenue and that, accordingly, additions to most reserves have been properly disallowed as deductions for income tax purposes. Such disallowance is separate and distinct from disallowance based on an arbitrary following of the deferment-of-deduction principle.

Although the oft-repeated rule that deductions from gross income are founded on purely legislative grace should not be pushed too far so as to tax gross income, it is nevertheless true that disallowance as deductions of much of the reserves or additions thereto has been wholly proper and justified. Otherwise, income tax liability might well be subject to whim and caprice, as well as to Casper Milquetoastishness, of managers; in either case, there is distortion, rather than reflection, of true income.

Granted that what has been just observed to be basically sound, there is still ample room for re-examination of tax treatment of additions to reserves. Reserves or additions thereto for anticipated but nevertheless non-recurring losses and expenses, impossible of measurement, should as a practical matter not be allowed as deductions for income tax purposes. To that extent, therefore, the present refusal of the Treasury and the courts to allow such deductions is proper and to be continued. There are, however, certain other reserves as to which relaxation of the present rules could well be made without serious risk to the revenue.

Additions to reserves for service, maintenance and other similar assurances or guaranties could well be allowed as deductions under as rigorous standards as are applicable to additions to reserves for bad debts. If the taxpayer has binding arrangements with its customers for various kinds of service or maintenance guaranties and its history shows a well-defined pattern of fulfillment of such obligations, capable of measurement in money terms, it should be permitted a deduction for amounts which it can show may reasonably be expected to be spent during the taxable period.

Not every expected payment, however, necessarily warrants or justifies allowance of a deduction. Thus, additions to reserves for contemplated payments for injuries and damages may well be disallowed because of the intrinsically non-recurring character of the payments, even though the tax- *(Continued on page 45)*

## Meet the men behind the scenes

H. D. Amann | W. G. Murfit | E. T. Colton | P. H. Butler, Jr. | F. V. Aler, Jr.

● **Customer Collections Subcommittee on The Credit Picture**—Chairman Howard D. Amann, The Brooklyn Union Gas Co., announces that this group is endeavoring to establish a regular semi-annual report that will present in a clear and concise manner a summary reflecting the payment trend in the nine census divisions of the country. Other industries publish similar data and it is the opinion of this group that such a service would be of benefit to the gas industry.

● **Customer Relations Subcommittee on Are We Training Employees to Meet the Public**—Chairman Wallace G. Murfit, The Philadelphia Gas Works Co., Philadelphia, Pa., discusses his group's undertaking as follows: "Man has harnessed the atom, but he has not harnessed confidence. There is a technique about the latter, as there has been a technique about the former, and the goal to be obtained by employee training is to promote this technique so that we shall not only be friendly, but also seem friendly." This group is endeavoring to uncover processes for training and to promote them for wider adoption in the industry.

● **General Accounting Subcommittee on Clarification of Reports to Stockholders, Employees and the General Public**—Chairman E. T. Colton, New Orleans Public Service Inc., New Orleans, La., reports that his group is endeavoring to develop a glossary of accounting terms and phrases, a simplified balance sheet, a simplified income statement and summary of surplus, suggestions for simplifying financial narratives, and other projects. The final report will be presented at the Detroit Conference in April 1949.

● **Materials and Supplies Subcommittee on Delivery of Material and Supplies Between Storerooms and Jobs**—Chairman Pat H. Butler, Jr., Washington Gas Light Co., Washington, D. C., describes this project as a study of the systems, vehicles, and handling equipment used by various companies. A meeting was held in Washington, D. C. in December and the completed digest will be presented at the 1949 Spring Conference.

● **Customer Relations Subcommittee on Branch Offices—An Asset or Liability**—Chairman Frank V. Aler, Jr., Queens Borough Gas and Electric Co., Far Rockaway, New York, announces that his group is studying the location and physical layout of branch offices; the extent to which the design, arrangement, furnishings, directional signs, etc., effect customer relations; and its effectiveness if the cashiers or employees behind the desks handle the customers improperly. A final report will be given at the Spring Conference.

Metals Committee meeting in Philadelphia, October 27. (Seated l. to r.) A. J. Pfetzing, Cincinnati; R. L. Melaney, Pittsburgh; S. F. Olinger, Cincinnati; A. M. Thurston, Cleveland; Carl Wierum, Brooklyn, chairman; M. A. Combs, A. G. A.; S. P. Rodgers and E. J. Funk, Jr., both Baltimore; R. E. Crane, Elizabeth, N. J. (Standing) K. I. Robinson, Newark, N. J.; E. B. Freeman, Muncie, Ind.; J. E. Pittinger, Philadelphia; E. L. Woods, Springfield, Mass., and H. A. Clark, Detroit.

# Ambitious plans laid for 1949

B. T. FRANCK, *CHAIRMAN* • D. W. REEVES, *VICE-CHAIRMAN*

Real progress was made last year by the various committees of the Section in promoting the sale of gas for industrial and commercial use. With an impressive array of projects planned for the coming year considerable headway should be accomplished to expand the uses of gas in the fields covered by this Section, according to a recent statement by Bernard T. Franck, chairman.

Plans for the new year have taken concrete form as a result of meetings held by the major committees and their 145 members. The Metals Committee, Carl Wierum, The Brooklyn Union Gas Co., chairman, at its first meeting during Metal Show week in Philadelphia suggested that the following subjects be investigated: stereotype metal melting and low temperature metal melting in general, together with consideration in the broad field of magnesium and aluminum. The fundamentals of heat treatment to be set forth in an Information Letter and to include A.S.M. material. An investigation on galvanizing was recommended plus a report on the status of present installations. This group also suggested that past Information Letters, such as the ones on brazing and speed heating, be brought up-to-date. Each subject has been assigned to a small geographically integrated group from this committee with separate chairmen or sponsors.

The Industrial Processing Committee under the chairmanship of R. W. Millard, Michigan Consolidated Gas Co., will again devote its efforts to the production of sales promotion and general educational help in the fields of ceramics, food processing, metal finishing, printing, and textiles. Information Letters on these subjects will be issued from time to time as the committee work proceeds.

At a recent meeting of the Food Service Equipment Committee, James V. Hall, Northern Indiana Public Service Co., chairman, it was decided to continue commercial gas cooking promotion as this committee's over-all objective. One of the specific points that will receive attention is the protection of the commercial cooking load against competition, through adequate servicing of appliances.

It was suggested that commercial gas men contact the main offices of hotel and restaurant chains in their respective cities to help make certain that installations under construction or being remodeled would have gas service specified. Another thought was that gas men visiting these chain offices could present a copy of *Commercial Kitchens,* newly published A. G. A. handbook for commercial gas men and service men. The water heater sizing section of this book is being adapted for master plumbers and others in the volume cooking market.

Pertinent topics to be investigated by the Commercial Processing Committee, L. J. Fretwell, Oklahoma Natural Gas Co., chairman include volume water heating in breweries and laundries, commercial air conditioning, 25-50 ton capacity, steam generation with recommended gas conversion equipment, and steam boilers for small pressing and cleaning shops.

The Committee on Displays in National Expositions has met to allocate space in the combined exhibit to be sponsored by *(Continued on page 35)*

# Conference program takes shape

Meeting of Programs and Papers Committee at American Gas Association headquarters in New York on December 9. (Left to right) John J. Bourke, A. G. A.; F. T. Brooks, Philadelphia; A. D. Wilcox, Rockford, Ill.; J. A. Rockefeller, Newark, N. J.; L. E. Biemiller, Baltimore, chairman; Carl H. Lekberg, Hammond, Ind.; M. A. Combs, A. G. A., and E. V. Fineran, Washington, D. C.

Opening meeting of the Programs and Papers Committee, L. E. Biemiller, Consolidated Gas Electric Light & Power Co. of Baltimore, chairman, was held recently to complete arrangements for the 1949 American Gas Association Sales Conference on Industrial and Commercial Gas to be held at the Andrew Jackson Hotel in Nashville, Tenn., April 5-7.

A broad over-all program crammed with material of interest to both industrial and commercial gas men has been arranged and is shown below. Speakers and discussion leaders will be announced in the near future.

*Tuesday, April 5*

COMMERCIAL GAS DAY

(10 A.M.-4:30 P.M.)

Luncheon at 12:30 with a prominent speaker.

Meetings of industrial committees, such as Metals and Industrial Processing, may be arranged for the afternoon.

Showing of the American Gas Association's sound color commercial cooking film "Where Food is Finest."

*Program subjects:*

(1) Water Heating Panel—Simplified sizing for restaurant water heaters and dishwashers. Developments in storageless water heating.

(2) Report on Investigation of Gas and Electric Commercial Kitchens.

(3) Diversified Commercial Sales—To include all opportunities for the sale of commercial gas other than restaurant kitchens.

(4) Modern Gas Ovens for the Retail Bake Shop—This discussion would also apply to institutional and large restaurant baking.

(5) Trends in School Kitchens—What school food service directors look for in modern equipment.

*Wednesday, April 6*

GENERAL SESSION

(9:30 A.M.-12 noon)

No luncheon this day.

Parallel symposiums on industrial and commercial gas subjects from 2 P.M. to 4:30.

Dinner at 7:30 P.M.

Certificates of membership in the Industrial and Commercial Hall of Flame will be presented to men who have qualified during the past year.

*Program subjects:*

(1) Fundamentals of Selling.

(2) Let's Get Away From Price Consciousness and Sell Quality Performance.

(3) A Phase of Selling the Food Service Market.

(4) Industrial Symposium on High Speed Heating and Galvanizing.

(5) Commercial Symposium on servicing from the viewpoint of a gas company commercial sales department official, a manufacturer's representative, and a gas company service superintendent. Also a discussion on Methods Used in Sell-

## A.G.A. at school food service show

Advantages of modern gas service were shown in this American Gas Association lounge at the recent School Food Service Association convention in Detroit. Some 445 members of the latter group attended the three-day meeting and visited exhibits in the school and volume feeding fields

ing Commercial Gas Equipment. (These two symposiums will be held concurrently.)

*Thursday, April 7*

INDUSTRIAL GAS DAY

(9:30 A.M.-12 noon)

Luncheon at 12 noon. (Two well-known speakers, one for the Tuesday luncheon and one for the Thursday luncheon, will be supplied by Nashville Gas & Heating Company as the host company.)

Commercial committees may schedule meetings during the afternoon.

*Program subjects:*

(1) Radiant Gas Burners—a report of research tests.
(2) The Surge Method of Paint Drying—to include a discussion of gas versus infra-red.
(3) Speeding Up Production by the Use of Gas for Processing in the Textile and Paper Industries.
(4) Gas Atmospheres in the Paint, Varnish, and Chemical Industries.
(5) Modern Core Baking Ovens.
(6) Protective Devices and Their Applications in Industrial Gas Utilization.

Complete information telling how to make individual reservations for the conference under the blanket reservation already made by the American Gas Association will be included in a later issue of the MONTHLY. Delegates should start planning now to attend this most important nation-wide meeting of the Industrial and Commercial Gas Section.

# Restaurant course off to fast start

The George L. Wenzel short course in restaurant operation for gas company commercial customers is well under way. This activity which has been made available to member companies is booked solid for the 1948-49 season.

These courses have been given by gas companies in cooperation with local restaurant and allied groups before selected and enthusiastic audiences. Here are some of the comments received from the first few bookings:

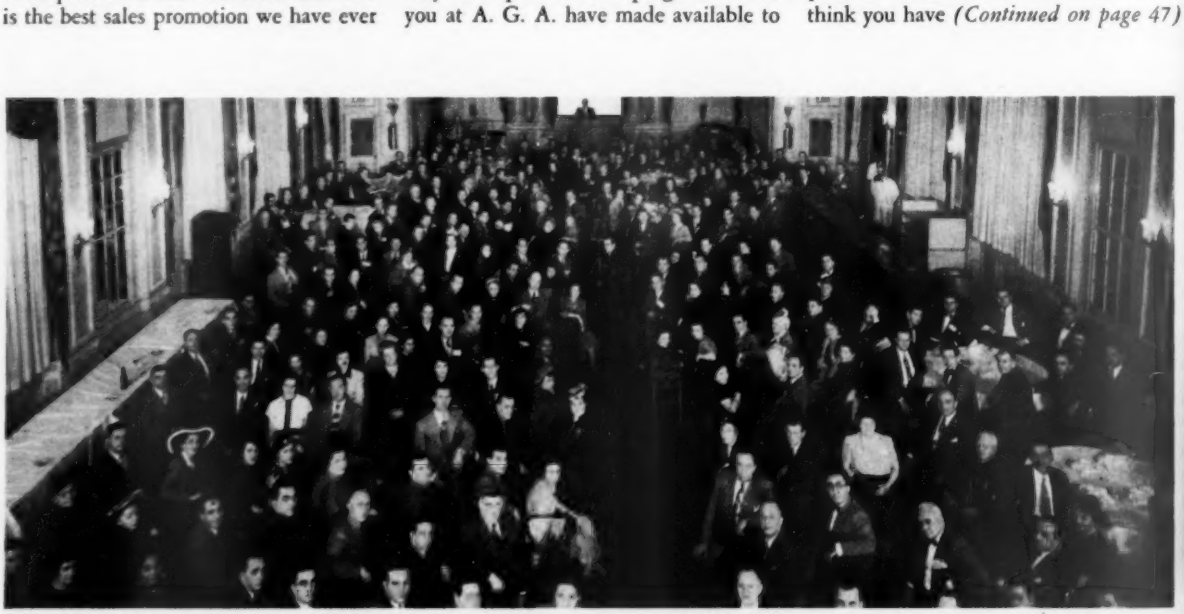
From Atlantic City "Every large hotel and restaurant organization had at least one representative take Wenzel's course. We have had many sincere compliments regarding it from the 160 persons who were present. I am convinced that this is the best sales promotion we have ever undertaken with our hotel and restaurant trade, and I believe our customer relations have been definitely improved as a result of this."

In Philadelphia the local restaurant association reported "It would be impossible to express to you in words my appreciation of the wonderful work you have done for the association. I have never seen a group of people more interested in any meeting we have held than they were last night, and we know the benefits we have derived will undoubtedly last forever."

Hartford applauded the Wenzel program in these words "I would like to convey to you our compliments for a very fine promotional program which you at A. G. A. have made available to member companies. I have never seen more real usable information given out in less time than was done by Mr. Wenzel. We would certainly recommend this program for any gas utility who wishes to do a promotional job among its commercial customers and be assured of adequate return from the expenditure."

Providence added that comments included—"Finest thing the gas company ever did," and one restaurant proprietor from Narragansett Pier 20 miles beyond the end of their mains said: "Run your lines down to the Pier, I want to buy your gas."

The company stated "I think it is 100 percent successful as it stands and I think you have *(Continued on page 47)*



Gatherings such as this sponsored by The Philadelphia Gas Works Company have attended the Wenzel course for gas company commercial customers

W. M. Jacobs (right), Section chairman. H. P. Morehouse (below), Section vice-chairman, and chairman, New Freedom Gas Kitchen Committee

# Section prepared for new year

During the past year a number of the appliance committees of the Residential Gas Section have resumed their sales activities as evidenced by the automatic gas water heating sales and promotional program, "For Hot Water Magic—Gas Has Got It"; the current gas range program featuring the themes, "Smart Cooks Know—Gas Has Got It," and "For That Cook Book Look—Gas Has Got It;" and the current nation-wide gas refrigeration sales campaign, "The Flame of Freedom."

While these campaigns have been very well received by the industry and have been used by many gas companies in their territories, it is believed that the Residential Gas Section could be of greater service to the industry if all programs for a given year involving sales, promotion and advertising, were completely developed and announced to the industry well in advance of the beginning of that year.

This would enable gas company sales and advertising departments to plan their own local campaigns and other activities for a calendar or budget year, so as to tie in with American Gas Association campaigns to the desired extent. At the same time the Association's National Advertising Committee, which must plan activities well in advance, would be enabled to consider coordination of advertising and sales objectives from the standpoint of both subject matter and timing of campaigns.

As a means of accomplishing these important objectives, the domestic appliance committees of the Section will endeavor to undertake long-range planning which will involve not only the planning of committee programs for 1949, but projection of them through the year 1950. It is recognized that there are numerous problems involved in this procedure, and that this long-range planning must be subject to such alterations as changing circumstances and the judgment of the succeeding year's committees necessitate.

Prior to undertaking such long-range planning, a nation-wide survey is being conducted by the A. G. A. Promotional Bureau to obtain a clear picture of the sales, promotional and advertising policies and practices of gas companies.

Results of this survey will be carefully tabulated and broken down for each appliance, and the results made available to the respective domestic appliance committees of the Section for study and review in preparing 1949 activities and projecting such activities through 1950.

The residential Gas Section consists of 11 major operating committees in addition to six subcommittees. All the activities of these committees have been carefully integrated and coordinated with those of the A. G. A. Promotional Bureau, which executes at the staff level the promotional aspects of the gas industry's promotional, advertising and research program, known as the PAR Plan.

The Section's Managing Committee is comprised of the officers of the Section; members at large, consisting of

Chairmen of appliance committees of A. G. A. Residential Gas Section: (L. to r.) L. L. Ladewig, C. H. Horne, Eleanor M. Morrison, L. P. Fridley, B. H. Wittmann, E. M. Demlow, D. W. Frye, W. D. Williams, H. P. Morehouse (shown at upper left) and Kenneth B. Lucas (no picture available)

former officers; chairmen of the operating committees, and representatives from all of the affiliated regional associations.

**All-Year Gas Air Conditioning Committee,** L. L. Ladewig, Houston Natural Gas Corp., Houston, Texas, chairman, plans to continue its efforts to promote the increased acceptance of gas summer air conditioning within the industry. These efforts will include:

(1) Preparation of a "plan-of-action" portfolio which will be focused on the replacement of winter air conditioning installations with all-year gas air conditioning equipment as a means of improving load characteristics without adding to the peak load.

(2) Preparation of a committee report based on material received in the Gas Summer Air Conditioning Progress competition.

(3) Organization of a series of regional meetings for gas companies.

(4) Publication of a quarterly newsletter to the industry.

(5) As information from authentic sources indicates that the gas situation will be materially improved in 1950, the committee expects to undertake a nation-wide sales and promotional campaign, including advertising and publicity during that year, directed to the consumer and to the important architectural and building professions.

**Domestic Range Committee,** C. H. Horne, Alabama Gas Co., Birmingham, Ala., chairman, plans:

(1) Continued promotion of the "Gas Has Got It" campaign and the current range sales and promotional program, "Smart Cooks Know—Gas Has Got It."

(2) Promotion of a national "Gas Range Month" campaign, in cooperation with national organizations such as the National Retail Furniture Association and other department store and dealer groups.

(3) Re-activation of the "CP" Ranger Club, which was a potent prewar sales tool, providing cash and honorary awards to top-flight "CP" range salesmen.

**Gas House Heating Committee,** Kenneth B. Lucas, Minneapolis Gas Light Co., Minneapolis, Minn., chairman, is now at work on important projects which will be completed during the coming year:

## Novel California home "built for living"

**Proof that kitchens can be beautiful and at the same time completely livable is contained in this new home near Beverly Hills, California. The owner, John Pedersen (left), for 27 years a noted California architect, is showing unique salad table feature to W. Q. Kringle, Southern California Gas Company. Kitchen, dinette and den are combined into a "living-kitchen" broken only by a half wall down the center. A New Freedom Gas Kitchen has been installed for gracious living**

(1) A printed report including a recommended campaign and a "plan-of-action" for the consideration of the gas industry, to the end of up-grading gas house heating through the replacement of outmoded, obsolete installations, as a basis for building a permanent and profitable gas heating load.

(2) The production of a pocket-sized handbook or manual on minimum installation standards for gas house heating equipment, which will be made available to gas companies for local distribution to the plumbing and heating trade.

(3) The resumption of gas house heating sales activities through the preparation of a nation-wide gas house heating sales and promotional program, to be put into effect by the committee, in light of the house heating situation as it may develop.

**Home Service Committee,** Eleanor M. Morrison, Michigan Consolidated Gas Co., Grand Rapids, Mich., chairman, will continue its work of preparing helpful subject matter for use by gas industry home service departments, and in setting up standard training courses for the benefit of home service work. During the year, a series of important home service workshops will be conducted, the first of which will be held in Cleveland, Ohio, January 24-27, 1949.

A questionnaire on home service "facts and figures" will be conducted throughout the year, and a project on "records and reports" is under way. A study of trends in home calls, and a booklet will be prepared on "questions and answers," to be used as part of the promotion in the 1949 "Court of Flame" water heating campaign.

**Housing Committee,** Lawrence P. Fridley, Rochester Gas & Electric Corp., Rochester, N. Y., chairman, will handle sale of the remaining copies of the "Reference Manual of Modern Gas Service" to gas utilities and directly to architects and builders.

The committee will also work with Governmental and private housing agencies and prefabricated home manufacturers. Distribution of information and data on housing to the industry will be continued.

Subject to the approval of the New Freedom Gas Kitchen Committee and the Section's Managing Committee, and consistent with the availability of gas for house heating and developments in the new-home building field, the committee has recommended a nation-wide "New Freedom Gas Home" architectural competition, similar in format to the very successful A. G. A. "All-Gas Home" competition conducted in 1937.

The committee further recommends a nation-wide "New Freedom Gas Home" builders' competition in 1951.

**New Freedom Gas Kitchen Committee,** H. Preston Morehouse, Public Service Electric & Gas Co., Newark, N. J., chairman, during the coming year plans to undertake the following:

(1) The number of editorial pres-

entations in national magazines will be increased.

(2) The number of actual kitchen displays will be increased by closer cooperation with manufacturers of gas appliances and of cabinets and kitchen equipment.

(3) The "Certification" Program will be expanded to include house heating, where possible, and to tie-in with manufacturers' plans for house heating.

(4) A motion picture on the essentials of kitchen planning has been under consideration during the latter part of 1948, and an effort will be made to complete the production of this picture during 1949.

**Refrigeration Committee,** B. H. Wittmann, Peoples Gas Light & Coke Co., Chicago, Ill., chairman, has made the following plans for 1949:

(1) National sales promotional programs and contests will be developed by the committee, in cooperation with Servel, Inc.

(2) National advertising by Servel, Inc., will be continued. Their appropriation for the coming year is the largest in their history.

**Committee on Selection and Training of Sales Personnel,** E. M. Demlow, Citizens Gas & Coke Utility, Indianapolis, Ind., chairman, plans to:

(1) Continue its work of promoting the increased use of the sales training course, "Residential Gas Salesmanship" by gas utility companies.

(2) A program directed to gas company sales managers on the importance of training local dealers will be prepared by the committee in 1949.

**Window and Store Display Committee,** D. W. Frye, Equitable Gas Co., Pittsburgh, Pa., chairman, will continue publication of "Window and Store Display Bulletin," and will add information and details of displays, display layouts, and techniques. A contest offering saving bond prizes to companies which submit the best utility and dealer displays will also be undertaken by the committee.

**Water Heating Committee,** W. D. Williams, Public Service Electric & Gas Co., Newark, N. J., chairman, will have as its major activity during the coming year the promotion of an all-out automatic gas water heating campaign, sponsored by the Water Heater Division of G.A.M.A. The theme of the campaign will be the "Court of Flame," and it will carry the slogan "For Hot Water Magic—Gas Has Got It." The program will include excellent brochures, portfolios, sales promotional material, and advertising, for distribution to the utility and dealer industries.

**Regional Conferences**—The three annual conferences sponsored by the Section will be continued by the Section during the coming year as follows: Eastern Natural Gas Regional Sales Conference, William Penn Hotel, Pittsburgh, Pa., March 14-15; Mid-West Regional Sales Conference, Edgewater Beach Hotel, Chicago, Ill., March 28-30; New York-New Jersey Regional Gas Sales Conference, Essex and Sussex Hotel, Spring Lake, N. J., June 20-21, 1949.

## LP-gas continues

*(Continued from page 18)*

found this essential in order to provide gas for house heating during peak demands when requirements exceed production. Transportation facilities, both tank car and transports, have been increased in adequate number to handle the increased amount of LP-gas marketed. The pipeline movement of LP-gas to the domestic, industrial and utility markets is increasing and during the year a major marketer completed a finished petroleum products pipeline through which propane and butane are transported.

### New production sources

New sources of production of liquefied petroleum gas together with the enlargement of existing producing facilities have increased the supply of LP-gas during the past year to keep pace with the increase in demand.

The acceptance, by most of the states in the United States, of the National Fire Protection Association Liquefied Petroleum Gas Code which is generally referred to as the National Board of Fire Underwriters' Pamphlet No. 58, entitled "Standards for the Design, Installation and Construction of Containers and Pertinent Equipment for the Storage and Handling of Liquefied Petroleum Gases as recommended by the National Fire Protection Association," indicates the general acceptance of this code as the basis for standards of safety. The code has been used in whole or in part as the basis of many state and local laws, rules and regulations, while various provinces in Canada are considering it for adoption as provincial regulations. The National Fire Protection Association during 1948 developed a code for the use of LP-gas by utilities.

While the unabated increased demands for LP-gas require major readjustments in all phases of the industry, every indication points to the ability of this industry to meet the challenge of these demands.

## Ambitious plans

*(Continued from page 30)*

the Industrial and Commerial Gas Section at the National Restaurant Exposition in Atlantic City, May 24-27. Hugh Wathen, South Jersey Gas Co., Atlantic City, N. J., chairman, states that the subsequent meetings will be held during the year for the Metal Show and Hotel Show which take place in the fall.

John C. Dorsey, The East Ohio Gas Co., chairman, Sales Training Committee, reports that plans are practically complete for the Industrial Gas School which will be held in Indianapolis during May.

Equipment Improvement will continue to be the goal of the committee under Walter S. Anderson, Boston Consolidated Gas Co., chairman. Some progress has already been made, but concentrated effort will be needed over a long period. The committee will continue its cooperation with the Gas Appliance Manufacturers Association and will also encourage manufacturers to secure A. G. A. Testing Laboratories approval of commercial cooking equipment.

The extensive activities of the Programs and Papers Committee, L. E. Biemiller, Consolidated Gas Electric Light and Power Co. of Baltimore, chairman, are reported on page 31.

W. R. FRASER, *CHAIRMAN* • ERNEST G. CAMPBELL, *VICE-CHAIRMAN*

*Cathodic protection correctly installed and used offers operating company large savings*

# How to cut corrosion costs

BY M. C. MILLER

*Ebasco Services, Inc.*
*New York, N. Y.*

M. C. Miller

In the City of Houston in 1942, the steel intermediate-pressure gas mains in the business district were developing leaks at a rate which, to the engineers of that company, seemed to justify complete replacements. Their estimate, prepared for the 1943 budget, was $102,000 for replacing those mains. However, after due consideration, instead of replacing the mains, cathodic protection was installed at a total cost of only $20,000. Since that time there have been only two leaks due to corrosion of those mains, although without a doubt many deep corrosion pits existed.

We believe that the life of those mains is now extended not by 20 or 30 years, but indefinitely. For an expenditure of $20,000 there was a cash saving of $82,000.

In another location in Houston, on a 12-inch HP line which is one of the main feeders from the city gate station and supplies a large portion of the gas to Houston, leaks were developing, but not at a rate to justify replacements. Cathodic protection was installed on that line in 1943 and there have been only one or two leaks on that line since.

The company engineers told me they believe that if cathodic protection had not been installed, they would have had to replace the entire line by this time at a total estimated cost of about $175,000. Cathodic protection cost approximately $10,000—a cash saving of $165,000.

We found also, after a thorough study and investigation of the Houston corrosion leakage situation, where the soil conditions are extremely corrosive, that only two or three short pieces of line have been replaced in the last three years because of corrosion. (Although there have been numerous lines removed and replaced because of street widening and grading).

We listed specific lines in Houston which normally would have been replaced because of extensive corrosion leakage. Instead of making replacements, cathodic protection was applied at a cost of about $30,000 or $40,000. Replacements would have cost around $150,000—a saving of more than $100,000.

These are not theoretical figures. These are as near the practical and actual figures as it is possible to obtain. When a job is done one way, it is difficult to determine what some other method of doing it would have cost.

Cathodic protection has been installed on the older mains in Houston which are very poorly coated with some of the older types of asphalt with fabric wrappings, not because they were up to the point in leakage where they needed replacements, but because the leakage was extreme and costly, and the cost of cathodic protection paid dividends at the rate of around 30 percent by reducing leakage costs.

The results of cathodic protection installations in Houston and elsewhere on the United Gas Corporation system are adequately described by A. D. Simpson, Jr., chief engineer, United Gas Corp., in a paper "The Mitigation of Corrosion on City Gas Distribution Systems" which he presented at a regional meeting of the National Association of Engineers in Tulsa, Okla. on September 21, 1948. I commend this paper for careful study.

Mr. Kuhn and Mr. Trouard of New Orleans have told me that cathodic protection has been applied to steel gas mains in New Orleans for the past 20 years, and in the past 15 or 16 years, they have not had one single leak from corrosion. That record is startling considering that the soil is extremely corrosive.

Let us consider the situation in one or two other companies, such as the Mississippi Power and Light Company. In Jackson, Miss., cathodic protection was installed seven years ago on one of the main 12-inch belt lines. Numerous leaks had been experienced. Since then only two or three have been experienced.

## Standard practice

I know that the cost of cathodic protection was very minor compared to what it would have cost to replace those mains. I am sure many of those lines would have had to be replaced by this time if cathodic protection had not been installed. That company has made extensive use of cathodic protection on distribution and transmission lines with outstanding results. It is their standard practice to apply cathodic protection as a part of all new extensions.

The Arkansas Power and Light Company had numerous old gas distribution systems of bare pipe with numerous corrosion leaks. During the war it was almost impossible to obtain pipe and labor was scarce. It was essential that something be done to stop corrosion leakage and to save those distribution systems until the war ended. Cathodic protection was installed and existing leaks repaired. In some cases protection

Presented at Technical session during 1948 American Gas Association Convention in Atlantic City.

was installed on the gas mains and water mains as one unit, by installing rectifiers and ground beds spread well over the systems. Up to date those installations have been highly successful.

In Montana, The Montana Power Company has had practically 90 percent of its gas transmission lines and distribution systems under cathodic protection for more than six years.

Take the case of another large company operating gas distribution systems in more than 100 towns and cities in the South. I was discussing their corrosion problems with engineers of that company and we were looking at the figures as to what had been accomplished. They prepared a list of a number of gas mains which had been replaced recently because of corrosion.

## Annual saving

We added up the actual cost of the replacements and estimated what it would have cost to install cathodic protection. In every case we showed that cathodic protection could have been installed at about half the cost, and I believe if we had wanted to be less conservative it would have been around 25 percent of the cost. In addition, there would have been an annual saving with cathodic protection on the old lines as compared to what it will be on new lines in the future when leaks start to develop.

That company has a 1948 budget item of around $200,000 for pipe-line replacements. They estimate it costs about $150,000 a year to replace lines because of corrosion.

We felt confident after a careful study that they could spend $75,000 on cathodic protection and do a better job than they could by spending $150,000 for replacements. In addition, our studies showed that if they were to invest a million dollars for cathodic protection on older lines—ahead of the time when they would have to be replaced due to corrosion leakage—they could probably realize around 30 percent return on their investment. Where else can your company make such a return on money invested?

I have been engaged in corrosion activity for a long time and I believe that we engineers have been backward in digging up some figures that we could stand back of.

There is another factor that is very important at this time—pipe and labor. Pipe is difficult to obtain and labor is expensive. If the defense program is stepped up—well, we know what happened last time. Steel pipe will be used for other purposes, and there are many systems where they just cannot operate without major replacements. War does not stop corrosion. Cathodic protection can save the day for those systems.

## Soil conditions

Some companies are fortunate in having distribution systems or pipelines where soil conditions are favorable and where there are little if any corrosion problems. Here the above savings would not apply to the same extent. There are many systems, however, where soil conditions are severe, even worse than the ones I have described, and where the savings could be larger than those mentioned.

Cathodic protection is an electrical phenomena and you would expect that electrical utility engineers would be making wide use of it. However, that is not the case. At a recent meeting in Asheville, N. C., which approximately 200 electrical engineers attended, I presented a few remarks about the corrosion activities we are conducting around the country. I mentioned to that group that gas engineers and pipeliners were out in front of electrical engineers in the use of cathodic protection to stop corrosion of various underground metallic structures.

I believe I can go further and say that the pipeline engineers who were operating cross-country pipelines are way out in front of gas engineers operating distribution systems, in applying cathodic protection to reduce corrosion leakage costs. This probably is to be expected because it is more difficult to apply cathodic protection to distribution systems.

We have heard much about interference problems. These are relatively easy to overcome through correct engineering and close-cooperation with engineers of other facilities.

I believe that within a few years the larger pipeline companies and gas utilities operating distribution systems will have corrosion departments headed by a competent corrosion engineer, so that cathodic protection installations will be correctly and economically installed and operated correctly. Cathodic protection thus installed and operated should pay the operating company large dividends.

# A.G.A. gets soil Redox probe patent

LETTERS PATENT No. 2454952 were granted recently to the American Gas Association, Inc. for an invention relating to methods and apparatus for measuring the corrosion characteristics of soil in situ. The granting of the letters patent to the Association is the direct result of the research activities of the Corrosion Research Fellowship and the work of the Corrosion Research Associate, the studies being supervised by the Subcommittee on Pipe Coatings and Corrosion of the Distribution Committees, A. G. A. Technical Section.

The research investigations of microbiological anaerobic corrosion were initiated in July 1941 at Rutgers University under the direction of Dr. Robert L. Starkey. A short time later Kent M. Wight was employed as the corrosion research fellow. Numerous interim reports relating to the progress of these research investigations in microbiological anaerobic corrosion were made to the membership of the American Gas Association in the Distribution Committee reports by Dr. Starkey, Mr. Wight, and the Corrosion Subcommittee chairman, Raymond F. Hadley.

Following the graduation of Dr. Wight from the Graduate school of Rutgers University, the data resulting from his research investigations were consolidated and compiled into one final report entitled "Anaerobic Corrosion of Iron in Soil" which was favorably received abroad as well as in the United States. Much of the material contained in the previously mentioned final report of the Iron Corrosion Research Fellowship relates to the development, use and interpretation of results obtained with the soil Redox Probe, the letters patent of which have just been granted to A. G. A.

Although additional field measurements are required to establish more precisely the exact correlation which exists between Redox potential and the severity of corrosion of subsurface ferrous structure, the initial field investigations of Dr. Starkey and Mr. Wight were extremely encouraging, indicating the suitability and reliability of the soil Redox Probe in future determinations of corrosive soil areas, even prior to the construction of pipelines through such soils.

The American Gas Association, ever interested in the reduction of corrosion costs to the industry, has dedicated these letters patent to the free use of the industry, the public and all those interested in the mitigation of underground soil corrosion.

# Industry news

## Ebasco establishes new safety awards

NEWLY-INSTITUTED safety awards were presented to presidents of client companies of Ebasco Services, Inc., by C. E. Calder, chairman of the board, Electric Bond and Share Co., at Ebasco's nineteenth annual presidents' meeting held at the Hotel Roosevelt, New York, November 29.

A. B. Paterson, president, New Orleans Public Service Inc., received a gold plaque for the achievement of that company's gas and electric operations in having an injury index 86.47 percent below the national average for the award year, July 1, 1947 to June 30, 1948. A silver plaque was presented to K. M. Robinson, president, The Washington Water Power Co., for an injury index 86.34 percent below the national average.

### Achievement citations

Certificates of achievement were presented to N. C. McGowen, president, United Gas Pipe Line Co., Shreveport, La.; W. O. Turner, president and general manager, Louisiana Power & Light Co., New Orleans, for transit operations; C. S. Thorn, president, Birmingham Electric Company—electric operations; H. E. Meade, executive vice-president, New Orleans Public Service Inc.—transit operations; J. B. Poston, president, Columbus and Southern Ohio Electric Company—transit operations; and H. J. Underhill, president and general manager, Superior Water, Light and Power Company. Similar certificates were also awarded the South Atlantic Gas Company and West Tennessee Gas Company.

The Ebasco Safety Award was inaugurated to stimulate increased safety effort among client companies and to afford recognition of such effort successfully applied. A committee of safety representatives worked out the award plan on the basis of an injury index (frequency rate plus ten times severity rate). Under this plan all companies or major operations thereof that achieve an employee injury index which is 25 percent or more below the national average for the respective industries, receive recognition with special recognition to the two companies with the best records for the period. In this way the plan matches the performance of each company with the national performance of companies engaged in similar operations rather than with the other companies in the group.

Rene Chambellan, nationally famous sculptor, was commissioned to design the unique trophy. On the large medallion a stalwart male figure, symbolizing accident prevention, holds the shield of precaution over gas holders, electric generators, trolleys, oil derricks, power lines, buses and other symbols of the industries in which the companies are engaged. In the background a female figure holding a spray of palm symbolizes the award motif.

Each year, the two companies bettering their national averages by the greatest percentage will receive a gold and silver medallion, respectively. The medallions are mounted on handsome mahogany plaques bearing appropriate inscriptions. All other companies or units whose injury indexes are below their national averages by 25 percent or more will receive achievement certificates bearing an imprint of the award design.

In presenting the Awards Mr. Calder said, "The importance of safety in modern industrial management is becoming more generally recognized. Managers of American business concerns are aware that profit or loss depends very largely today upon harmonious employee-customer-public relations. To gain and hold the good will of personnel, customers and the general public it is necessary to have an effective safety program.

"Despite your efforts and ours and despite the efforts of the committees of our various associations and the excellent work being done by the safety directors and safety engineers, the record of the utility industry in accident prevention is below average.

"Our most qualified safety people realize that safety is too big a job to be departmentalized but calls for the combined efforts of all parts of the organization, and for a program to be successful it must have the interest and attention of the top executives. In fact they tell me that the interest of the heads of the company is the most potent single factor in a successful accident prevention program. In thinking of other ways in which we could be helpful to you in this matter we thought of the possibility of stimulating executive interest in a tangible way by creation of this Ebasco Safety Award."

**Here are recipients of Ebasco safety achievement awards at the New York meeting, November 29: C. S. Thorn (left), Birmingham Electric Co.; A. B. Paterson, New Orleans Public Service Inc.; K. M. Robinson, The Washington Water Power Co.; H. J. Underhill, Superior Water, Light and Power Co.; (rear row, left to right) J. B. Poston, Columbus and Southern Ohio Electric Co.; W. O. Turner, Louisiana Power and Light Co., and N. C. McGowen, United Gas Pipe Line Company**

## Utility gas sales rise in October

TOTAL SALES of gas by gas utilities to ultimate consumers in October 1948 totaled 2,378,446,000 therms, an increase of 10.5 percent over sales in October 1947, according to the American Gas Association. For twelve months ending October 31, 1948, total sales of gas were 31,751,294,000 therms, a gain of 9.9 percent over the comparable period a year earlier. The Association's index of gas sales at the end of October, 1948 stood at 203.5 percent of the 1935-1939 average.

Natural gas sales in October 1948 totaled 2,128,632,000 therms, an increase of 12.2 percent over the same month in 1947. For the twelve months ending October 31, 1948, natural gas sales amounted to 28,023,887,000 therms, up 12.1 percent over the comparable period a year earlier. The index of natural gas sales on October 31, 1948 stood at 213.6 percent of the 1935-1939 average.

Because of changeovers from manufactured gas to natural gas distribution by several important companies during the year, sales of manufactured gas in October were 0.1 percent under a year earlier, aggregating 165,546,000 therms compared with 165,782,000 therms sold in October, 1947. For the

twelve months ending with October 1948, manufactured gas sales were 2,515,267,000 therms, an increase of 3.8 percent over the same period in 1947. The index of manufactured gas sales on October 31, 1948 stood at 141.7 percent of the 1935-1939 average.

Mixed gas totals more seriously reflect the effects of changeovers to natural gas by major companies and in this category, sales in October, 1948 totaled 84,268,000 therms, a decline of 5.5 percent under October 1947. For the twelve months ending October 31, 1948 mixed gas sales totaled 1,212,140,000 therms, a decrease of 17.1 percent under the comparable period a year earlier. The index of mixed gas sales stood at 151.6 percent of the 1935-1939 average on October 31, 1948.

## Blue Flame glasses prove popular item

DEMAND has been so heavy for the Blue Flame glasses which the Gas Appliance Manufacturers Association offered at the 1948 American Gas Association Convention that this popular item is now available for re-order.

Each glass is of the 11-ounce variety, 5¼ inches high with a heavy bottom, and bears an attractive blue flame, but no advertising. Utilities and home service groups can order the glasses from the Gas Appliance Manufacturers Association at two dollars per set of eight.

## Publicity and advertising meeting

A. G. A. Publicity & Advertising Committee in session in New York, December 3. (Clockwise around table) Don Schively, Hartford, Conn.; Jean C. Thompson, A. G. A.; W. H. Hewson, Brooklyn; Jessie M. Hughes and George A. McDonald, A. G. A.; R. G. Barnett, Portland, Ore., chairman; Howard A. Praeger, Brooklyn; J. J. Quinn, Boston, chairman, A. G. A. National Advertising Committee; Charles J. Allen, Waterbury, Conn.; Arthur Q. Smith, A. G. A.; Joseph A. Gallagher, Newark, N. J.; Robert D. Lewis, St. Louis, Missouri, and James M. Floyd, Dallas, Texas

PLANS for augmenting and accelerating its program of publicity in 1949 were discussed at the organization meeting of the newly-appointed Publicity and Advertising Committee of the American Gas Association held at A. G. A. Headquarters on December 3.

R. G. Barnett, vice-president, Portland Gas & Coke Co., Portland, Ore., chairman of the committee, pointed out that the Association's president, Robert W. Hendee, has pledged himself to the broad purpose of "selling" the gas industry to outside industries and to the public during the coming year. In this endeavor, the Publicity and Advertising Committee can offer valuable aid, Mr. Barnett said.

The publicity program recommended by the committee calls for increased effort by the A. G. A. Publicity Bureau in telling the story of gas in domestic, trade, financial, industrial, and general magazine and news fields. Increased efforts will also be made to encourage individual utility companies and appliance manufacturers to seek every opportunity to publicize their achievements and operations.

## Trans-Continental to use larger pipe

TRANS-CONTINENTAL Gas Pipe Line Co., Inc., Longview, Texas, has been authorized by the Federal Power Commission to substitute 30-inch pipe for 1,210 miles of 26-inch pipe in the proposed natural gas transmission system to be constructed from Texas to New York City. Trans-Continental Gas Pipe Line Corp., a Delaware corporation, was authorized to acquire, construct and operate proposed facilities of the Trans-Continental Company.

Changes in the proposed project are not expected to alter the initial daily delivery capacity of 325 million cubic feet in summer and 340 million cubic feet in winter, but would permit a possible increase in ultimate capacity. Estimated cost of the 1,840-mile pipeline project as now proposed is $191,310,154.

## National gas advertising plans prepared for 1949

Members of three A. G. A. committees and representatives of two advertising agencies planning 1949 national gas advertising at meeting in Cleveland, Ohio. (Sitting, l. to r.) J. P. Leinroth, chairman, Industrial & Commercial Gas Copy Committee; J. J. Quinn, chairman, National Advertising Committee; R. T. Ratliff, chairman, Domestic Gas Copy Committee; Christy Payne, Jr., H. S. Christman, Kenneth Fellows, J. C. Sackman, Gussie O. Jones, D. R. Schively, Margot Sherman. (Standing, l. to r.) C. E. Livingston, A. C. Evans, R. M. Alderman, R. A. Gordon, C. G. Cassidy, Noel Mallaby, W. H. McInnis, H. Vinton Potter, J. I. Gorton, S. C. Gorman, C. W. Person, J. M. Beall. Also present but not in picture were: W. B. Hewson, A. P. Kelly, Raymond Little, G. A. Uhlmeyer, Paul I. Berno, Karl Emmerling, R. J. Canniff. Meetings took place December 8-9

# Consolidated Edison wins "Oscars"

BETTERING its record of last year, Consolidated Edison Co. of New York, Inc., recently won two "Oscars of Industry" for its advertisement announcing the 1947 annual report to stockholders. At the eighth annual Oscars of Industry awards banquet sponsored by *Financial World* magazine, the company's advertisement was announced as not only the best in the utility field but also best in all industry. Henry Obermeyer, director of advertising, accepted the awards.

The previous year *Financial World* awarded the company a bronze "Oscar" for its advertisement publicizing the 1946 annual report which was rated as the best of its kind done by any public utility.

The prize-winning advertisement, titled "Con Edison Reports to You—How We Met the Challenge of 1947," employed a variety of techniques. At the top appeared a comic strip, "Around Our Town," in which the smiling Edison Man was seen telling Mr. and Mrs. New Yorker what the company was doing to keep up with the greatly increased demands for electricity, gas and steam. The Edison Man explained that the company had spent $76 million in 1947 and planned to spend $280 million in the next four years.

The advertisement detailed company achievements in 1947. All production records were broken it was noted, revenues were up seven percent and the payroll for the first time topped $100 million. Costs, however, kept rising too, by some 17 percent in fact. Completing the advertisement, a statistical table showed just what was done with every dollar that came in.

In addition to the "Oscars," awarded for promotion of an annual report, the company received a certificate for the report itself.

**This advertisement announcing Consolidated Edison Company's annual report received an "Oscar"**

# Brooklyn Union honors employees

AT THE twenty-fifth annual presentation ceremonies on December 1, approximately 366 employees of The Brooklyn Union Gas Company received awards consisting of service emblems, McCarter Medals, meritorious emblems, National Safety Council Awards and miscellaneous awards by the gas company.

President Clifford E. Paige commented that more than 28 percent of the gas company's present employees have been on the payroll for 25 years or more. Mr. Paige also noted 55, 60 and 65-year-service anniversaries of six employees. Vice-President Hugh H. Cuthrell presented awards to 38 employees for heroic and meritorious acts.

American Gas Association McCarter Medals for successful resuscitations involving the use of the prone pressure method were awarded to Robert H. Smyth, Leo J. Holly, Frederick W. Ferber, Cosmo Salvemini, Patrick Grogan and Joseph Brunda.

An A. G. A. McCarter Certificate for assistance in prone pressure resuscitation was awarded to John Buckley.

# S.G.A. sales manual released

THE sales section of the Southern Gas Association has prepared and published a comprehensive 192-page revised sales manual, "Selling Gas Appliances," which is a valuable addition to the promotional literature of the gas industry. Contents utilize original material compiled by the Pacific Coast Gas Association as well as other information on the most advanced selling techniques.

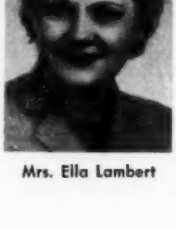
Divided into nine units which might well mark the guideposts in an effective gas appliance sales course, the manual covers a large amount of basic information for salesmen, as well as specific sales methods for various types of appliances. Basic data includes gas fuel information, efficiency ratings, heat transfer, burner design, combustion, venting, and gas pressure.

Sales principles and the use of prospect files receive prominent attention. Entire units of the manual are devoted to gas cooking, water heating, refrigeration, and house heating. In each case, diagrams and other illustrations clarify the points discussed.

"Selling Gas Appliances" may be obtained from the Southern Gas Association, 1230 Mercantile Bank Building, Dallas 1, Texas, at a special price of $1.00 per copy to A. G. A. members. Regular price is $2.00 per copy.

## Noted menu and recipe book revised

A NEW BOOK entitled "For the Discriminating Hostess" has been prepared by Mrs. Ella Liner Lambert, home service director, Milwaukee Gas Light Company. This is the second and completely revised edition of this nationally-known book of menus and recipes. It is published by the Manual Arts Press, Peoria, Ill., and priced at $3.25.



**Mrs. Ella Lambert**

This volume is the result of work with foods in the experimental kitchen and demonstration platform of the Milwaukee Gas Light Company. The recipes and menus selected have been the most popular ones used for demonstration purposes and those requested by the well-known cooks of Milwaukee.

Another publishing feat accomplished recently by Mrs. Lambert is a booklet entitled "Friendly Menus" prepared for the Wisconsin State Brewers' Association. Inquiry for single copies should be sent to that association in Milwaukee.

## Tennessee Gas expansion facilities authorized

TENNESSEE GAS TRANSMISSION CO., Houston, Texas, has been authorized by the Federal Power Commission to build additional natural gas transmission facilities for transporting 111 million cubic feet of gas a day for the account of The Manufacturers Light and Heat Co., Pittsburgh, Pa., from the Southwest into the Appalachian area.

The facilities authorized represent only part of an over-all expansion program which the Tennessee company is seeking. Over-all cost of the authorized facilities is estimated at $49,569,391.

# Consumers' Gas marks centennial

THE CONSUMERS' GAS COMPANY of Toronto, Canada, which celebrated its one hundredth anniversary on March 23, 1948, recently released a well-planned and handsomely-printed annual report giving the highlights of its progress from 1848 to 1948. In addition to this report, the company has sponsored a series of outstanding institutional advertisements in newspapers under the general theme, "Gas—Toronto's unfailing servant for 100 years."

The annual report traces the company's steady progress and gives a picture of vitality and adaptability to ever-changing conditions. Charles Dickens, who visited Toronto in 1842, is shown as having written in his "American Notes:"

". . . but the town itself was full of life and action, bustle, business and improvement. The streets were well paved and lighted with gas."

Output of gas the first year was 1,146,000 cubic feet. By 1846 this had increased to 4,833,000 cubic feet. When the company celebrated its twenty-fifth anniversary in 1873, customers numbered 2,050, mains totaled 56 miles, and 740 street lamps were being supplied with gas.

By 1947, customers had reached 177,839, and gas production had advanced to more than eight billion cubic feet. During its centennial year the company set a new record by producing more than eight and one-half billion cubic feet of gas.

Physical property of the company today consists of two manufacturing plants, five gas holders, a service center, an administrative office, three sales offices, two distribution locations, and a system of 1,200 miles of mains and 1,600 miles of service pipe.

The newspaper advertisements commemorating the centennial point out unique facts about Toronto and tie in the city's spectacular growth with the advance of gas service. Fine line sketches of Toronto landmarks illustrate the series, which has proved most effective.

A. L. Bishop is president of The Consumers' Gas Company and Edward J. Tucker is vice-president and general manager. Mr. Tucker is a director of the American Gas Association and long has been active in A. G. A. affairs.

# Savannah Gas Company marks centennial

TRIBUTE to the 13 pioneer Savannahians who founded the Savannah (Ga.) Gas Company 100 years ago was paid at the centennial birthday party of "Savannah's Oldest Public Servant" last month. The increasingly strong financial position of the utility was stressed by Royce A. Hoyle, Jr., treasurer of the company, who served as toastmaster.

Walter R. McDonald, Georgia Public Service Commission, and Mrs. McDonald, were special guests of the gas company employees at the centennial banquet. Hansell Hillyer, president of the company, presented service pins to employees who had completed a specified length of service with the company.

Commenting on the growth and development of the Savannah Gas Co., Mr. Hoyle noted the completion of a three-year construction program to provide adequate facilities for the increasing demand for gas.

The company treasurer called attention to a recent study by a firm of certified public accountants comparing the profits of the South Atlantic Gas Company (the parent company of Savannah Gas) with all manufactured gas companies which report to the American Gas Association.

"This certified report shows three salient facts," he said, "one, that the gross revenue of our company is almost exactly the national average for 1946 and 1947, the two years under study. Two, that the net profits of South Atlantic were identical with the national average in 1946, but our profits increased in 1947 to 9.7 percent of gross as against the national average of 5.2 percent. And three, South Atlantic's profits from merchandise and liquified petroleum were 4.2 percent of gross revenue against less than one percent of the national average in 1946, and that in 1947 our profits on these items increased to 6.8 percent, while the national average only climbed to 1.6 percent of gross revenue."

Mr. Hoyle also pointed out that the company had paid three extra dividends within the past fifteen months.

**Seen at the anniversary party of Savannah Gas Company on December 13 were: (left to right) Royce A. Hoyle, Jr., company treasurer; Walter R. McDonald, chairman of the Georgia Public Service Commission; Hansell Hillyer, company president, and Haywood S. Hansell, first vice-president**

# G.A.M.A. commended for 1948 exhibition

THE American Gas Association on December 1 formally expressed its appreciation to members and officials of the Gas Appliance Manufacturers Association for the outstanding exhibition of gas appliances and equipment in Atlantic City during the 1948 A. G. A. Convention. Following are some of the resolutions unanimously adopted at a meeting of the A. G. A. Executive Board:

"The exhibition, the largest ever staged by the gas industry, dramatically demonstrated the remarkable progress made by the manufacturers in their efforts to provide the people of America with the World's most efficient and beautiful gas appliances and the gas utilities with the apparatus to serve those people most economically.

"In this exhibition, the manufacturers provided a mammoth, costly and effective classroom. In that classroom, anyone, directly or indirectly connected with the gas industry, could acquire a valuable knowledge of what is now available in apparatus for handling gas and in gas utilization appliances. It can be assuredly said that those fortunate to have had the opportunity to inspect and study this great gas exhibition came away with the definite impression the gas industry is progressive.

"Realizing the costliness and usefulness of such an exhibition, the Executive Board hereby expresses its desire and willingness to cooperate with the Gas Appliance Manufacturers Association in the conduct of the American Gas Association Convention in an effort to make future and similar displays of maximum benefit to all concerned."

## Dominion Natural operates new plant

A NEW oil-gas plant capable of producing and delivering six million cubic feet of gas a day during peak-load periods has been placed in operation at Port Stanley by The Dominion Natural Gas Co., Ltd., Brantford, Ontario, Canada. The "twin generator" process is used, a new development of The Gas Machinery Co., Cleveland, Ohio, and the plant is the second of its type in Canada.

According to S. B. Severson, company president, operation of the new unit will be under the general supervision of F. D. Howell, division superintendent in charge of the St. Thomas and Brantford areas. Addition of the plant provides total gas production capacity sufficient to serve the present requirements of the company's present customers.

During the winter months when more gas is needed to supplement the supplies of natural gas, the oil-gas plant at Port Stanley and the company's propane plant at Brantford will be coordinated. The combined total output of both plants, when running at full capacity, is ten million cubic feet of gas per day.

## Oil Compact meeting

**Beauford H. Jester (left), Governor of Texas and retiring chairman, Interstate Oil Compact Commission, shown at commission meeting in Wichita, Kan., December 9-11, with the new chairman, Kansas Governor Frank Carlson**

## Central Indiana column promotes gas service

TO catch the attention and hold the interest of housewives who skip over the usual advertisements, Central Indiana Gas Company is running a series of weekly columns in a list of ten Indiana newspapers. Prepared by Handy Flame, Indianapolis, the columns run under the same heading, "Cookin' With Gas." They cover cooking hints and suggestions on water heating and refrigeration.

## Rochester cooking class

**Robert Helfer, Rochester Gas & Electric Company salesman, has just baked the cookies he is passing out to customers. All salesmen took a cooking and baking course from the home service department and served their own Christmas foods**

## Gas program presented before A.S.M.E.

THE annual meeting of The American Society of Mechanical Engineers in New York, Nov. 28-Dec. 3, featured an impressive account of the growth of natural gas and the extensive research of the manufactured gas industry.

Paul R. Taylor, vice-president, Stone & Webster Service Corp., New York, described the impact of natural gas in territories previously served by manufactured gas. Carl E. Wierum, The Brooklyn Union Gas Co., and chairman, A. G. A. Metals Committee, spoke on the sound utilization of gas. Gas production research of the American Gas Association was reviewed in a comprehensive paper by E. S. Pettyjohn, director, Institute of Gas Technology, entitled "Meeting the Peak Loads of Manufactured Gas."

Gebhard C. Beck, The Brooklyn Union Gas Co., served as 1948 chairman of the Process Industries Division, A.S.M.E., which sponsored the meeting.

C. S. Goldsmith, The Brooklyn Union Gas Co., was chairman of the meeting.

Papers presented are available from A.S.M.E., 29 W. 39th St., New York, at a price of 25 cents each to members and 50 cents each to non-members.

## Game elected by Mid-Southeastern group

E. P. GAME, Roanoke Gas Co., Roanoke, Va., was elected president of the Mid-Southeastern Gas Association at the Tenth Annual Meeting in Raleigh, N. C., November 11 and 12. One hundred and forty-five members attended.

Eugene Leier, South Carolina Electric & Gas Co., Columbia, S. C., was elected first vice-president; Ralph Gibson, Tide Water Power Co., Wilmington, N. C. was elected second vice-president and Edward W. Ruggles, Raleigh, N. C., secretary-treasurer.

Featured addresses included a talk "This Is The Time" by Frank J. Nugent, president, Gas Appliance Manufacturers Association, and "Selling Tomorrow—Today!" by Hugh H. Cuthrell, vice-president, The Brooklyn Union Gas Company. "The National Fuel Supply" was discussed by George H. Smith, assistant managing director, American Gas Association.

## American Stove completes 1948 cookbook

THE 1948 edition of "Magic Chef Cooking," an attractive full color, plastic-bound 140-page book of practical recipes, has just made its bow. Included is a wide variety of dishes and explicit instructions for preparation, times and temperatures for baking as well as simple but complete directions for cooking.

Prepared and edited by American Stove Company under the direction of Dorothy E. Shank, this book will doubtless follow its predecessors in wide acceptance in homes, schools, laboratories and home demonstration kitchens. It has been recognized as an authority on cooking recipes and methods ever since this company in 1924 pioneered in publishing the first time and temperature cook book to accompany the first oven heat regulator.

The edition is offered to Magic Chef dealers to be used as a premium with the purchase of new gas ranges, for presenting to customers in exchange for names of prospects, or for direct sale. Retail price is $1.50 per copy but special quantity prices are offered dealers.

## Glossary of gas industry terms released

A 48-PAGE Glossary of Terms containing more than 700 definitions of terms commonly used in the manufactured and mixed gas industries is now available for distribution. The new publication was prepared by F. H. Achard, consultant, Personnel Management Problems (formerly supervisor of training, Consolidated Edison Co. of New York, Inc.), and Earl R. Hamilton, engineer, gas department, New England Power Service Co., Boston, Massachusetts.

Orders for the glossary should be sent to F. H. Achard, care of Drahca Personnel and Training Services, 755 Boylston St., Boston 16, Massachusetts. Cost of single copies is 60 cents, postage paid.

## Potter heads industrial & commercial research

**A PAR activity** LESTER T. POTTER, assistant to the president, Lone Star Gas Co., Dallas, Texas, has been appointed chairman of the American Gas Association Committee on Industrial and Commercial Gas Research by Robert W. Hendee, A. G. A. president. Mr. Potter has been a member of this committee for more than a year and has been active in the group's direction of research projects at A. G. A. Testing Laboratories and other institutions.

L. T. Potter

A graduate of Texas Agricultural and Mechanical College, Mr. Potter is representative of the type of young engineering executive that is playing such an important part in the current expansion of the gas industry, both physically and technically. He has been a member of the Lone Star organization since 1928, and immediately before becoming assistant to the president was chief production engineer and superintendent of production.

Serving with Mr. Potter on the Industrial and Commercial Research Committee are R. F. Chadwick, Jr., Atlanta Gas Light Co., Atlanta, Ga.; D. W. Chapman, The Peoples Gas Light & Coke Co., Chicago, Ill.; Karl Emmerling, The East Ohio Gas Co., Cleveland, Ohio; Raymond L. Gordon, Public Service Co. of Colorado, Denver, Colo.; F. B. Jones, Equitable Gas Co., Pittsburgh, Pa.; Charles C. Krausse, Consolidated Gas, Electric Light & Power Co. of Baltimore, Baltimore, Md.; J. P. Leinroth, Public Service Electric & Gas Co., Newark, N. J.; Franklin T. Rainey, The Ohio Fuel Gas Co., Columbus, Ohio; Carlton W. Roll, The Brooklyn Union Gas Co., Brooklyn, N. Y., and George A. Uhlmeyer, Iowa-Illinois Gas & Electric Co., Rock Island, Illinois.

The program of this committee is designed to fortify and extend industrial and commercial uses of gas through the development of advanced technical knowledge applicable to a wide variety of processes and applications. The stability of the industry requires that the most effective, as well as the most efficient, use of gas be attained in the competitive industrial and commercial fields. Sound and basic gas heat application techniques that advance with, or ahead of, rapidly changing industrial methods are a prime requirement toward continued stability.

Currently active industrial and commercial gas research projects include advanced combustion studies looking toward higher heat releases; oxygen-air-gas combustion investigations; metallurgical factors that affect high-speed heat treating with gas in comparison with induction heating; power burner and radiant heat applications to heavy duty hotel ranges, broilers, etc.; and improvement of heat application to counter and miscellaneous commercial cooking appliances. Plans are being developed by Mr. Potter and his committee to undertake additional research investigations, affecting other important industrial and commercial fields, during 1949.

Mr. Potter succeeds Ralph L. Manier, Central New York Power Corp., Syracuse, N. Y., who has directed this committee as chairman for the last two years.

# Personal and otherwise

## G.A.M.A. names water heater director

STANLEY C. GORMAN, Los Angeles, Calif., has been appointed sales promotion director of the Gas Water Heater Division, Gas Appliance Manufacturers Association, according to an announcement by H. Leigh Whitelaw, managing director.

Mr. Gorman will direct the most comprehensive, far reaching and all-inclusive cooperative sales, advertising and promotional campaigns ever developed for the automatic gas water heater industry.

He has had wide experience in the gas appliance field, having owned and operated his own gas appliance store. He also was associated with the Richfield Oil Company as assistant to the vice president in charge of sales and dealer promotion. He designed and promoted the first home builders' guide on the Pacific Coast, stressing proper construction and suggestions for modern living through use of modern home equipment.

S. C. Gorman

Mr. Gorman also formerly was affiliated with Southern California Gas Company as a dealer promotion representative. He also has conducted sales campaigns promoting sale of gas water heaters, ranges, and other promotions.

## Brooklyn Union promotes Diekmann

H. A. Diekmann

HENRY A. DIEKMANN has been promoted from assistant to manager to the post of assistant manager, new business department, The Brooklyn Union Gas Company.

Mr. Diekmann is a member of the American Gas Association and a graduate of Stevens Institute of Technology as a mechanical engineer. He joined the Brooklyn gas company as a cadet engineer in 1934. Since then he has served successively as floor salesman, district representative, district house heating supervisor, coordinator, supervisor of the house heating group, and finally assistant to manager before his present assignment.

## Killian heads G.A.M.A. Marketing Committee

R. T. Killian

R. T. KILLIAN, Bryant Heater Co., Cleveland, Ohio and Carl J. Dinic, Rheem Manufacturing Co., New York, have been elected chairman and vice-chairman, respectively, of the Marketing Committee, Gas Appliance Manufacturers Association.

Mr. Killian is manager of the market development and research department of Bryant Heater and a graduate of Miami University. He is a member of the American Marketing Association, the American Statistical Association, and served as vice-chairman of the G.A.M.A. Marketing Committee and as chairman of this group's Subcommittee on Gas Water Heaters during 1947 and 1948. Mr. Killian succeeds Marc W. Pender, American Stove Company.

Carl J. Dinic, manager, commercial research, Rheem Manufacturing Co., a year ago became chairman of the Marketing Committee's Subcommittee on Heating & Air Conditioning Equipment.

## Draper elected by F.P.C.

COMMISSIONER CLAUDE L. DRAPER of Wyoming was unanimously elected vice-chairman of the Federal Power Commission on December 7 to serve during the calendar year 1949. He will succeed Harrington Wimberly of Oklahoma who served in 1948.

## Taylor made Florence Stove president

R. H. Taylor

ROBERT H. TAYLOR has been elected president of Florence Stove Co., Gardner, Mass., to fill the vacancy caused by the death of Edward F. Dobson. Mr. Taylor, who has been vice-president in charge of sales and a director of the company, has had wide experience in the firm's operations over a period of 16 years.

After graduating from Northwestern University he joined the Florence organization in 1932 and took the factory and office training course at the Gardner plant. Mr. Taylor was promoted to general sales manager of the company in 1947 with headquarters at the Gardner plant.

## Portland builds

*(Continued from page 20)*

monthly volume to a point where, if it continues at the present rate, the year 1949 should show a total of $200,000—$250,000 in appliance sales. This is at the rate of $11.00 to $13.50 per domestic meter which we believe to be a satisfactory, normal volume of business.

A portion of this decrease is due to a shortage of certain types of appliances during what should be a peak selling season. However, this is incidental to the fact that we have apparently reached the saturation point of deferred demand and, due to decreased consumer buying power, buyer resistance is a very real thing. We feel that the only means at our disposal of coping with this situation is through the medium of intensive merchandising activities.

In connection with this belief, I should like to call attention to the remarks of George Jones appearing in his editorial in the September *Servel News* captioned "Promotion of Gas Sales Is A Utility Responsibility" and to two statements in that editorial.

"Experience has shown that, should the utility relinquish even temporarily its direct activity in the promotion and sale of a particular appliance, the quality of merchandise offered for sale deteriorates and the volume of appliance distribution decreases.

"Experience has demonstrated that, even in a market having a wide consumer acceptance, utility selling activity must continue."

In order to succeed, any appliance merchandising program requires the whole-hearted, intelligent support of the manufacturers. In my opinion, there is one matter in which they are at fault and which should be brought to their attention.

I believe that many suppliers are unquestionably pricing themselves out of the market. There is no doubt but that everyone would probably like to own a Cadillac or a similar automobile. Obviously, however, this is impossible. By the same token, many, many people would like to own the expensive deluxe type of appliance in which we now find ourselves specializing, but unfortunately find themselves unable to do so. These consumers are left with an extremely limited selection, I believe that many manufacturers are concentrating to a dangerous extent on too many high-priced, super-de-luxe units. Serious consideration should be given to the production lines with fewer different models and lower prices.

There is one other matter that I should like to mention. That is the need for field contacts by manufacturers' representatives that are of maximum value to the merchandising program. Periodic calls of unskilled contact men contribute little and often waste valuable time. The real need is for manufacturers' representatives who are able to conduct frequent inspirational meetings with the men on the firing line. These men should know their product and be able to present it in a stimulating fashion. One such meeting can contribute more to all concerned than a dozen visits or luncheons with the sales manager.

In some cases, this assistance is available and the sales manager who fails to take full advantage of it is, I believe, overlooking one of his most valuable sales aids. We in Portland believe in a continuous training program, welcome this type of sales help and conduct such a meeting at least once every 90 days. In 1948, we have also reviewed the entire A.G.A. sales training course. The planning and execution of a continuing sales training program is not only an important function but a definite responsibility of all sales managers.

There obviously is great need for "a modern sales approach by well-trained salesmen." We believe that Portland has it. Suitable selection methods and training programs are available and we have used and are using them. As regards adequate compensation, our men are averaging $4,500 per year. At the moment, this seems a reasonable, satisfactory and, to us, a profitable figure.

Advertising is an important part of our promotional activities. We have a number of key billboard locations under annual contract and are constantly using the excellent posters made available to us by certain manufacturers. The newspapers are also being used on a co-operative basis. We are in the process of equipping all of our schools with modern "CP" ranges and plan to replace them on a periodic basis. We have a comprehensive dealer plan, primarily on water heaters, involving all of the master plumbers, which is probably the most generous plan in existence, and curiously enough from the standpoint of tangible results, the most disappointing phase of our sales activity.

I have tried to give a concrete picture of our method of operation in Portland and of the results obtained. In conclusion, I should like to leave this thought.

We all know that every replacement appliance we sell is like an insurance policy. Every new usage sale shuts out competition for probably a period of ten years at least. But we cannot continue to go forward indefinitely unless our companies take reasonably prompt action to solve the production problems facing so many of us.

## Steam tables

*(Continued from page 22)*

operation. Burners should be carefully selected for a given application. However, they can not be expected to perform efficiently if means are not provided for properly locating them. The relative height of a burner in respect to the heat transfer surface is of the utmost importance for maximum efficiency. Figure 4 illustrates the effects of burner locations.

No specific recommendations are given here for correct burner height, as burner design, input rating, primary aeration and other related items must be considered. Performance tests also should be conducted to determine the best aver-

age efficiency consistent with good combustion. However, these considerations follow well established design principles which are outlined and reviewed in the new Research Report No. 1112, and are further elaborated upon in several A.G.A. Laboratories research bulletins.

The new report contains a number of charts indicating such design considerations as the proper gas input rating for steam tables of various sizes, recommended burner port loadings and sizes for various gases, recommended total port area and number of ports required, and correct orifice sizes for typical gases. Also explained is the method of conducting performance and efficiency tests. Likewise, consideration is given to the subject of improving sales appeal through designing for better appearance and the more effective use of automatic controls.

## Deferred credits

*(Continued from page 29)*

payer's activities are such as to cause some injuries or damage to persons or property each year.

In the matter of reserves for cash discounts on prompt payment of accounts receivable, present Treasury practice is uniformly to disallow additions to such reserves. Here, too, however, there would appear to be justification for allowance of a deduction under strict surveillance on adequate proof by the taxpayer of the reasonableness of the addition.

IV. During the past few years, extensive discussions have taken place in professional and business circles as to the need for reflecting the effect of rising costs of replacement on depreciation of existing plant and equipment. Divergences of opinion have been many and strong, bespeaking serious conflicts in fundamental approach.

There are those who contend that the present dollar bears little buying power relationship to the original dollar spent in purchasing or constructing plant or equipment years ago; that additions to depreciation reserve based on original cost make little, if any, economic sense now; and that income-wise additions to such reserves on present costs should be allowed as tax deductions to "reflect true income."

At this writing the accounting profession officially has not subscribed to such contentions. Of course, tax-wise, deductions for depreciation will, in the absence of clear legislation to the contrary, continue to be allowed only on original tax cost. Any hopes that in the absence of such legislation the Treasury would permit depreciation allowances based on present day prices are merely gossamer or sheer moonshine.

Where in this picture should public utilities stand? No definitive answer is given here because none can be given. It is pertinent, however, to observe that as regulated units of business activity, public utilities occupy a status different from industry generally. What may be unobjectionable accounting wise in the case of a manufacturing company may be wholly unwise in the case of a utility, subject to regulation by governmental authority. Furthermore, if the theory of reliance on present prices is sound as compared to original cost, then what shall be the answer when reproduction cost falls below original tax cost?

### Stanton Godfrey Krake

owner and publisher of *American Gas Journal*, 53 Park Place, New York, one of the gas industry's oldest and best-known publications, died December 21 at his home, 319 Washington Ave., Brooklyn. He was 79 years old.

Mr. Krake was born in Brier Hill, New York, and went to New York City in 1893 to act as publishers' representative for several outstanding industrial publications. He later represented *American Gas Journal*, of which he acquired full ownership and control in 1924. The magazine was changed from a weekly to a monthly publication in 1927.

During his quarter century of journalistic leadership, Mr. Krake strongly supported the American Gas Association and many progressive movements which have contributed to the steady advance of the industry. He became known and respected from coast to coast.

He was a member of the American Gas Association, the Gild of Ancient Supplers, and other organizations.

His daughter, Mrs. James Adikes, survives.

### J. E. King

formerly co-chairman of the Accounting Employee Relations Committee, American Gas Association, and wage co-ordinator of the personnel department, Consolidated Edison Co. of New York, Inc., died December 19 at his home in the Bronx, New York, following a heart attack.

Mr. King had been active on A. G. A. accounting committees for the past five years and had a broad background in commercial relations and company personnel work. Two years ago he was assigned to the Consolidated Edison company's executive development program.

He began with New York and Queens Electric Light and Power Company in 1929 as a senior clerk in the maps and records bureau and three years later was named job and wage analyst. He became a system supervisor in 1939. The same year he transferred to the Consolidated Edison company where he became assistant to the system commercial manager. Four years later he was named a personnel advisor.

Assigned to the company's executive development program in 1947, Mr. King went into training as a station co-ordinator and later became a superintendent's assistant in the outside plant construction department. Last August he was named wage co-ordinator.

Mr. King graduated in 1925 with a B.A. Degree from Holy Cross College and later earned the degree of Master of Business Administration from New York University.

He is survived by his wife, Mrs. Margaret King.

### Arthur C. Watt

financial analyst, died Sunday, November 21, at his home in Scarsdale, N. Y. following a long illness. His age was 62. For many years he was a member of the Publicity and Advertising Committee of the American Gas Association.

He played an active part in the program which resulted in the combination of properties into the Commonwealth Power Corporation. This concern was the nucleus of the Commonwealth & Southern Corporation which was formed in 1929. At the time of his death, Mr. Watt was an executive assistant of Commonwealth & Southern Corporation.

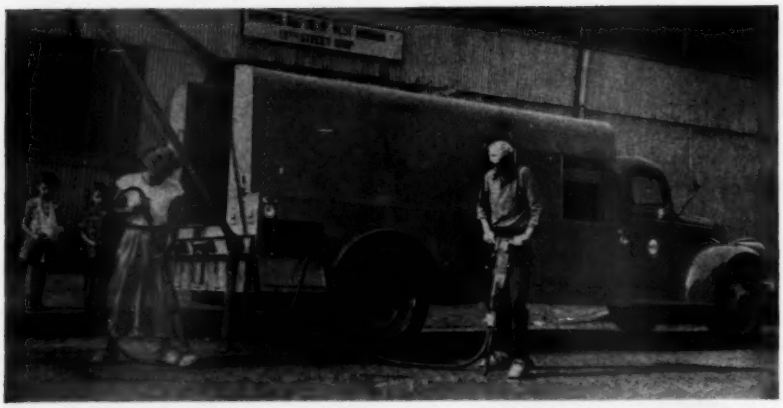
In his work in the public utility field, Mr. Watt made notable contributions to the advertising and public relations activities of the electric and gas industries through his association with several national organizations, including the National Electric Light Association, the Edison Electric Institute and the American Gas Association.

In addition to his wife, the former Dorothy Janeway, he leaves a daughter, Dorothy Watt.

### Dr. F. G. Cottrell

former director of the U. S. Bureau of Mines and inventor of the Cottrell precipitator, died at Berkeley, Calif., November 16. The electrostatic methods he invented for clarifying air and gases and for breaking emulsions of water in petroleum proved so important that his name was as well known to industrialists as to scientists.

# Unique gang truck developed



**Either two large paving breakers or two pneumatic hammers can be operated at the same time from the compressor mounted in this novel new gang truck of the Natural Gas Company of West Virginia**

A NOVEL development in gang trucks has been developed by the Natural Gas Co. of West Virginia, a member of the Pittsburgh group of The Columbia Gas System, Inc. Basic ideas for the new gang truck were formulated in 1946. G. E. Wilson, superintendent of distribution, coordinated various plans for augmenting the design and shape of the body that had been conceived by Frank Weinzierl, foreman.

After the two-ton heavy-duty chassis and the compressor were received at the garage, work started on lengthening the truck frame and chassis. Rear wheels and axle were moved back 36 inches, giving the truck a 196-inch wheelbase.

This alteration provided length enough to mount the compressor and winch and still left adequate room for seats. A canvas top rolled across the slot in the roof assures protection from rain or snow for 20 men riding in the truck. According to Mr. Wilson, the vehicle is well-balanced and handles as easily as any straight two-ton job.

## Gas sets records

*(Continued from page 6)*

warmer.

Commercial restaurant food sales now represent seven billion dollars annually, the third largest retail business in the country. In addition, much of the five billion dollar annual income of hotels is derived from restaurant sales. These rapidly expanding industries require modernization as well as new construction and should bring greater sales of gas commercial equipment.

*Operations of A.G.A. Testing Laboratories*—The unprecedented demands for gas as a domestic fuel were apparent in the rapid expansion of testing activities at the Association's Testing Laboratories in Cleveland and Los Angeles. This service reached an all-time peak in 1948.

More than 3,000 different appliances were tested last year. While the bulk of this testing was handled at the main Cleveland Laboratories, the rapid industrial expansion of the Pacific Coast was reflected in the doubling of the Laboratories' testing facilities in that area.

Testing of domestic heating appliances required an extra shift operation for their handling. An increase of 24 percent in furnaces and boilers tested was experienced over last year. Space heater testing increased 25 percent and 20 percent more domestic ranges were tested than a year ago.

Inspection services also increased with the test load. New factories and new companies producing approved appliances and accessories necessitated further extension of inspection activities, and more wide-spread checking of the equipment being produced in the field. Inspections at factories increased 22 percent. Production conditions and quality of equipment manufactured were found improved over the previous year.

*Approval requirements*—Revision, coordination and simplification of the standards on which the testing program is based was carried forward at an accelerated rate. Seven sets of revised requirements received the approval of the American Standards Association, Inc. Covering new developments and improvements, they incorporated many technological advances made during the war period as well as experience gained in the field.

*Research at the Laboratories*—In the research field, efforts at the A.G.A. Laboratories were devoted mainly to developing technical data to advance the methods of applying gas heat in appliances and to overcoming new conditions faced because of radical changes in home design and construction. Of special interest were studies of kitchen ventilation covering grease deposition and duct temperatures, performance of new types of forced-air furnaces intended for confined space installations, developments of heat transfer in central heating furnaces, and research in possible improvements in counter appliances such as coffee urns, steam tables and dry-food warmers.

*PAR Plan*—The confidence of the gas industry in the Association's coordinated program of promotion, advertising and research was again demonstrated in the fourth year of the PAR Plan. The results of the expenditures in the fields of promotion, advertising and research more than speak for themselves. The PAR Plan is to be carried on next year at an accelerated rate when approximately $1,600,000 will be devoted to these important activities.

*Research*—General Technical Research projects carried on under the PAR Plan proved of especial interest and potential value to natural gas and pipeline companies, as well as to the manufactured gas industry last year. Projects covering such subjects as removal of nitrogen and sulfur, corrosion and pipeline coatings brought specific help to gas utility companies.

More than a dozen utilization research bulletins were issued as a part of the PAR domestic research program, informing appliance manufacturers and gas company technicians of the findings under these projects. Results already achieved have made possible improvements in burner design, controls, and in the utilization of gas appliances. Work done on mixed gas research has been summarized in the first of a series of comprehensive reports of great value to gas utilities faced with the problem of using standby fuels to meet peak loads.

Noteworthy progress was recorded in the field of gas production research during the year. Catalytic reforming of hydrocarbons advanced from pilot plant to

actual operation by manufactured gas companies. A new regenerative process, the result of two years' work under the PAR gas production research program, was brought to successful conclusion at the plant of the Consolidated Gas Electric Light and Power Company of Baltimore. This process effected a saving of more than 30 percent in the cost of gas making fuels and increased thermal capacity of existing sets by 35 percent through use of heavier and cheaper oils in manufacturing B.t.u. gas.

Projects in fluidization for the gasification of solid and fluid fuels are continuing and projects exploring other oil-gas techniques are being carried on that should benefit the industry.

*National advertising*—The gas industry's largest single promotion of the year was the intensified drive in behalf of automatic gas ranges. This was a national cooperative project in which the Association joined forces with 13 manufacturers, 200 gas utility companies, and several thousand dealers throughout the country.

Spearhead of the campaign was the Association's national advertising program. This was augmented and supplemented by national consumer advertising, financed by manufacturers, and a large volume of local advertising sponsored by gas companies and dealers.

More than 10,000 newspaper advertisements on automatic gas ranges were published during the year, setting a new industry record in the volume of point-of-sale advertising. Total investment of all interests in this coordinated campaign to promote automatic gas cooking has been estimated at $8 million. Results of this campaign are apparent in the greatly increased sales of automatic gas ranges.

In addition, the Association continued its advertising program in behalf of gas fuel for industrial and commercial purposes most effectively since gains in these integrated fields were among the highest reported for last year.

*Promotion*—This year's advertising of automatic ranges was implemented greatly at the local level by the A.G.A. range merchandising campaign carried on under the Association's promotional program. This program was broadened at the dealer level, and approximately 165 gas utility companies are taking part in this effort to bring better gas ranges of all types to the attention of the consuming public.

The "Hot Water Magic" promotion earned the participation of about 170 gas utility companies and the support of many of the 42,000 water heater dealers in the United States. This program was a forerunner of an integrated national advertising and promotional campaign on water heating to be carried in 1949.

"Winning Seals of Approval," the industry's motion picture film in full color presenting the story of modern automatic gas ranges through the A.G.A. Laboratories Seal of Approval and the "CP" seal of performance, is currently being shown in about 500 schools per month. Distribution of the picture story book "History of Gas" has reached more than 750,000 students.

## Career recordings

In cooperation with the national recruitment program, designed to help meet the rapidly increasing need for trained home economists, the Home Service Committee of the Association produced in 1948 a series of career recordings entitled "Home Economics For Me." These records were made available by local utility companies and attracted much attention by educators as the means of attracting many students to this important profession.

*Technical developments*—Several of the technical advances made by the gas industry in the past year have been mentioned earlier in this report. Corrosion and purging problems have been studied and progress reported toward their solution.

The trend toward mechanization has extended to every phase of the gas business, since it is a vital factor in helping utilities meet continuing high costs of labor and materials. Growing demand for radio communication as an essential part of the gas industry's transmission and distribution systems spurred efforts on the part of the industry to obtain unimpaired mobile radio channels in the interests of efficiency and safety.

Accident prevention has been an important work of the Association and through instruction, publicity and technological efforts, the gas industry's safety records are constantly improving.

*Accounting Developments Service*—A new service was developed for the accounting branches of the industry last year which provides periodic bulletins on new developments and procedure used by various companies within and without the industry. The latest developments in office machine and equipment fields will also be brought to accounting personnel through these periodic releases.

*Conclusion*—Today, more than ever before, the gas industry is united in all its efforts. This unity has accomplished much in the fields of production, promotion and service that has been beneficial to the entire industry. The spirit of coordinated enterprise that carried the gas industry so far ahead in the past year most certainly will light the way to even greater achievement next year and the years to follow.

## Restaurant course

*(Continued from page 32)*

done a real job making this program available to the industry."

During the last part of 1948 the Wenzel program was presented in cooperation with local gas companies in Boston, Hartford, Providence, Philadelphia, Atlantic City, Detroit and Brooklyn.

Time-table for presentation of this short course in the first part of 1949 is as follows:

Jan. 17-18-19 The Peoples Natural Gas Co., The Manufacturers Light & Heat Co., Equitable Gas Co., Pittsburgh.

Feb. 14-15-16 Central Illinois Electric & Gas Co., Rockford.

Feb. 28-Mar. 1-2 Michigan Consolidated Gas Co., Grand Rapids.

Mar. 3-4-5 Richmond Gas Corp., Richmond, Ind.

Mar. 7-8-9 Minneapolis Gas Company.

Mar. 16-17-18, 21-22-23 Southern California Gas Co., Los Angeles.

Mar. 24-25-26 Pacific Gas & Electric Co., San Francisco.

Mar. 28-29-30 Portland Gas & Coke Co., Portland, Oregon.

April 4 to 9 Seattle Gas Co., Seattle, Washington.

April 11-12-13 Birmingham Gas Co., Birmingham, Alabama.

May 2 to 7 Lone Star Gas Co., Dallas and Fort Worth, Texas.

Due to the very satisfactory response to this short course for restaurant operators there is a possibility it will be offered again to member companies later in 1949. Some gas utilities have already booked Mr. Wenzel for a return engagement.

## CONVENTION CALENDAR

### 1949

### JANUARY

**24-27** •A. G. A. Home Service Workshop, Hotel Statler, Cleveland, Ohio.

**24-27** •American Society of Heating & Ventilating Engineers, Stevens Hotel, Chicago, Ill. (A. G. A. will exhibit)

**24-28** •International Heating and Ventilating Exposition, International Amphitheatre, Chicago, Ill. (A. G. A. will exhibit)

**28** •Pennsylvania Gas Association, Mid-Winter Sales Conference, Benjamin Franklin Hotel, Philadelphia, Pa.

### MARCH

**14-15** •A. G. A. Eastern Natural Gas Regional Sales Conference, Residential Gas Section, William Penn Hotel, Pittsburgh, Pa.

**17-18** •Oklahoma Utilities Association annual convention, Hotel Tulsa, Tulsa, Okla.

**24-25** •New England Gas Association, annual meeting, Hotel Statler, Boston, Mass.

**28-30** •A. G. A. Mid-West Regional Sales Conference, Residential Gas Section, Edgewater Beach Hotel, Chicago, Ill.

### APRIL

**4-6** •A. G. A. Distribution, Motor Vehicle and Corrosion Conference, Netherland Plaza Hotel, Cincinnati, Ohio

**5-7** •A. G. A. Sales Conference on Industrial and Commercial Gas, Andrew Jackson Hotel, Nashville, Tenn.

**5-7** •G. A. M. A. annual meeting, Broadmoor Hotel, Colorado Springs, Colo.

**10-12** •Gas Meters Association of Florida-Georgia Annual Meeting, Ponce de Leon Hotel, St. Augustine, Fla.

**11-13** •A. G. A.-E. E. I. Spring Accounting Conference, Hotel Book-Cadillac, Detroit, Mich.

**11-13** •Mid-West Gas Association, forty-fourth annual convention, Hotel Fort Des Moines, Des Moines, Iowa

**12-14** •Southwestern Gas Measurement Short Course, College of Engineering, University of Oklahoma, Norman, Okla.

**20-22** •Southern Gas Association, annual convention, Buena Vista Hotel, Biloxi, Miss.

**22** •The Maryland Utilities Association, annual meeting, Lord Baltimore Hotel, Baltimore, Md.

**28-29** •Indiana Gas Association, annual convention, French Lick Springs Hotel, French Lick, Ind.

### MAY

**9-10** •A. G. A. Natural Gas Department Spring Meeting, French Lick Springs Hotel, French Lick, Ind.

**9-13** •A. G. A. Industrial Gas School, Hotel Severin, Indianapolis, Ind.

## Help prevent industrial accidents

(1) Industrial accidents can be controlled under modern conditions of highly efficient productivity.

(2) Efforts to improve safety performance do not interfere with production. The things which make a plant safe make it efficient.

(3) The experience of large groups of companies proves that material reductions in accident rates can be obtained simultaneously with an increase in production rate.

(4) Major industrial executives have as much responsibility to initiate accident prevention as to initiate improvement in productivity.

(5) Maximum productivity is ordinarily secured only when the accident performance tends toward the irreducible minimum

*—W. F. Brown, Consolidated Edison Co. of New York, Inc., chairman, Accident Prevention Committee, American Gas Association.*

# Personnel service

## SERVICES OFFERED

**Chemical Engineer**—Recent graduate of B.P.I. Graduate study in Distillation, Chemical Engineering, Economics and Instrumentation. Undergraduate work in design, chemical engineering processes and fuels. Extensive training and experience in electrical and electronic controls. Desire production or development work N. Y. area. Veteran (23). **1594.**

**Sales Engineer—Manager:** Ten years Industrial, Commercial, Heating experience; four years sales manager of 40,000 meter manufactured gas utility. Excellent public relations background. One whose interest is to foster good public relations, to keep existing services active, and to add profitable load. Married, excellent health. References available. (39). **1595.**

Well known **Engineer-Executive** available for consulting and advisory assignments as far as permanent situation. Thoroughly experienced in all phases of the manufactured gas business —management, production, distribution, service, rates, employee relations, publications, etc. Also experienced in natural gas. **1596.**

**Manager-Engineer.** Extensive training and experience in the operation of gas properties. Well versed in the production of carburetted water gas and propane air including conversions. Experience includes **high and low pressure** distribution, sales and commercial activities. College graduate with technical degree. Licensed engineer in Pennsylvania. **1597.**

**Chemical Engineer,** B.Ch.E. 1948 (cum laude), Tau Beta Pi; conscientious, ambitious, draft status 1C; Resigned out-of-town position to continue graduate studies in N.Y.C.; Desires full-time position within commuting distance Metropolitan Area. (25). **1598.**

**Mechanical Engineer**—University of Connecticut, 1923. Technical Consultant and Results Engineer. Twenty-five years experience economic and engineering studies; planning research, site desirability, historical cost analysis of construction, valuation, continuing property records, depreciation, retirements, procurements and production, markets. Personnel, studies in power and light, gas, railroads, chemical and manufacturing plants. **1599.**

**Eastern Sales Executive**—With 20 years of outstanding results selling utilities. Available in early December wants connection representative manufacturer of equipment for production, distribution or utilization of gas. Top references. **1600.**

**Tax Accountant**—15 years extensive experience in tax problems. Past five years exclusively with natural gas and oil working at top level in setting tax procedures and policies. Ability to work with personnel at all levels to produce efficient results. Location unimportant but desire southwest. Married. (38). **1601.**

**Controller, Treasurer,** Accounting and Financial **Executive**—Last four years Secretary-Controller Head Finance Division $80,000,000 utility. Previously eighteen years large utility system from Accountant to Assistant Controller of holding company. Relations with present employer excellent. Present salary $11,000. Graduate St. Lawrence University. Major economics. **1602.**

**Selling** to dealers and gas companies, with headquarters in Cincinnati representing high grade gas range lines or, **sales manager** in Cincinnati district with A1 rated bottled gas company. **1603.**

**Senior Sales Engineer** (college graduate)—with 20 years' experience in the utility field. Available as sales manager, assistant to executive or as gas appliance distributor. **1604.**

## POSITIONS OPEN

**Production Superintendent** for large coal gas plant. Young man, experience with continuous vertical retorts desirable but not essential. Splendid opportunity for energetic person. **0538.**

Medium size straight gas utility—planning changeover to natural gas—has permanent position for young, experienced individual capable of directing **distribution** and **customer service** activities. **0539.**

**Service Man** for employment with utility company in sub-district propane air system. Experience in servicing appliances and laying mains and services is preferred. Reply giving in detail experience, education and salary expected. **0540.**

**Accountant**—Experienced in customer and general accounting methods and procedures to specialize in **systems** work. Accounting machine experience desirable. Headquarters in New York with considerable travelling. Substantial salary and future opportunity. **0541.**

**Design Engineer**—Graduate engineer with 5 or more years in design, development or application of gas-fired, steam, and hot water unit heaters to head up design group. A knowledge of heat transfer essential. Production experience desirable. Well established AAA1 company located in New York State. Salary open. **0542.**

**Sales Engineer**—Experienced in selling, installing and servicing industrial heating and ventilating equipment. To cover S.W. Connecticut. Car necessary. Commission plus expenses. All applications considered confidential. Write full details concerning education, experience, etc. **0543.**

**Assistant Gas Engineer**—To assist in general supervision of operation and maintenance natural gas distribution properties in Middle West. Should have technical education also experience operation and maintenance water gas plants. **0544.**

Experienced **Corrosion Engineer** for electrolysis and corrosion mitigation work with large middlewest Gas Company. Please write full details concerning experience and other pertinent data. **0545.**

**Rate Consultant**—Preferably graduate engineer, to develop rate structures for natural and manufactured gas; make studies of markets, competition and costs. Location New York; travel involved. Submit complete resume. **0546.**

**Assistant Superintendent—Production**—Eastern Utility 22,000 M cubic feet water gas plant. To handle plant operation, maintenance and construction. Should be graduate engineer and experienced in heavy oil operation. $7,500 per year to start. Rapid advancement and responsibility assured. Five years or more gas works experience essential and under 45 years old. Reply giving qualifications in detail and age. **0547.**

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# American Gas Association

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